

**Attached is Information  
For**

**Presentation on the Jackson Bluff Dam Spillway Project**

**Meeting of Tuesday, November 10, 2009**

**This document distributed November 10, 2009**



Douglas E. Barr  
Executive Director

RECEIVED NOV 10 2009

## Northwest Florida Water Management District

152 Water Management Drive, Havana, Florida 32333-4712  
(U.S. Highway 90, 10 miles west of Tallahassee)

(850) 539-5999 • (Fax) 539-2693

November 9, 2009

Leon County Board of  
County Commissioners  
Attn: Parwez Alam  
301 South Monroe Street  
Tallahassee, FL 32301

**RE: Surface Water Management Application 04-2009-0006 I**  
**Jackson Bluff Dam Spillway Modification – Gadsden County**

Dear Mr. Alam:

The District requested for the city to document the presence or absence of any change in the frequency, depth, or duration of flooding downstream in the last incompleteness letter sent to the City of Tallahassee on October 19, 2009. Per your request for information on October 28, 2009, a copy of the City's response to our Request for Additional Information submitted to us on November 6, 2009 is attached.

Feel free to call if you have any other questions.

Sincerely,

Lance Laird, P.E., Chief  
Bureau of Surface Water Regulation

Ll:sp

Enclosure

Cc: Leon County Board of County Commissioners  
Alan Rosenzweig, Assistant County Administrator  
Tony Park, P.E., Director of Public Works  
Joseph L. Brown, III, P.E., Director of Engineering Services  
Theresa B. Heiker, P.E., Stormwater Management Coordinator  
Anita Favors Thompson, City Manager  
David McDevitt, Director, Growth & Environmental Management  
Chairman, Gadsden County Board of County Commissioners  
Chairman, Liberty County Board of County Commissioners  
Chairman, Wakulla County Board of County Commissioners  
Chairman, Franklin County Board of County Commissioners

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Panama City Beach

JOYCE ESTES  
Eastpoint

TIM NORRIS  
Santa Rosa Beach

JERRY PATE  
Pensacola

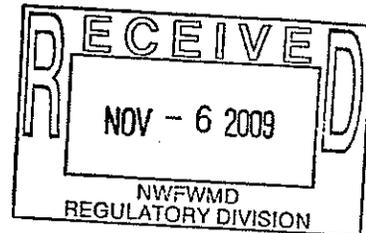
RALPH RISH  
Port St. Joe



November 6, 2009

**VIA HAND DELIVERY**

Mr. Lance Laird  
Northwest Florida Water Management District  
81 Water Management Drive  
Havana, Florida 32333-4712



Re: City of Tallahassee – Corn Hydroelectric Generating Facility  
Spillway Modification Project – Application 04-2009-0006 I  
Request for Information dated October 19, 2009

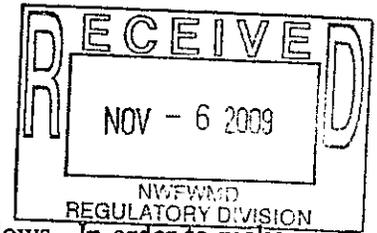
Dear Lance:

The City and Mead & Hunt (M&H) are in receipt of your letter dated October 19, 2009 requesting additional information with respect to the subject application. As you know, the City has provided you with a legal opinion explaining that the Federal Power Act preempts your agency from requiring the City to obtain a construction permit for the proposed spillway modification. Additionally, pursuant to Section 40A-4.101(3) F.A.C., the City believes that the District's October 19, 2009 request for additional information is not timely. However, without waiving the rights that the City has regarding pre-emption and the timeliness of the District's October 19, 2009 letter requesting additional information, the City is replying to your request as follows in the remainder of this letter.

In your letter, you requested the City provide information that quantifies the change in duration, magnitude and frequency of the downstream flooding and the associated impacts from the proposed modification of the Jackson Bluff Dam. Specifically, you requested the City provide pre- and post- impacts to homes, roads, infrastructure, etc. at the 50-year and 100-year flood events. Outlined below is the City's response. This response is based on information developed by Mead & Hunt, the City's engineer for this project.

Attached you will find a report, dated November 4, 2009, where Mead & Hunt addressed additional questions raised by the Florida Department of Environmental Protection (FDEP). This report contains 8 attachments that include the spillway rating curves, a comparison of the downstream river stage, flow and average velocities, and a series of hydrographs for various flood cases. I have also included a letter dated October 28, 2009 from the City to FDEP.

While you requested the information for the 50-year and 100-year flood events, it is important to note that the proposed modifications are to address those flood events when the existing earthen emergency spillway is overtopped. Limiting the review to the 50-year and 100-year flood events results in an inaccurate assessment of the impacts and benefits associated with this project, since



this overtopping does not occur until slightly above the 100-year flood flows. In order to make an accurate assessment of the benefits of this project, it would be appropriate to review the pre-modification and post-modification changes at these higher flows. Summarized below are some key observations based on the information depicted in the attachments to the November 4, 2009 Mead & Hunt report.

1. In reviewing Attachment 2, you will note that the average river velocities downstream of the facility remain essentially the same or lower as the result of the proposed modifications. As a result, there will be no change in scour or erosion as a result of the proposed modification.
2. At the 50-year flood event (Attachment 4), there is no change in the flow profiles downstream.
3. At the 100-year flood event (Attachment 5), there is a very slight increase in the downstream water levels at the 60-100 hour mark in the event. This slight increase (~0.22 feet) is gradual and controlled. Moreover, it is within the variability in river levels associated with factors such as the margin of error of river level monitoring equipment and extraneous variables such as wind speed and direction. Accordingly, this projected impact is so slight that it is considered to be negligible with respect to potential adverse consequences for homes, roads, or infrastructure.
4. At the 68,000 cfs case (Attachment 6), the same very slight increase occurs downstream starting approximately 60 hours into the event. With the existing emergency spillway there is a predicted surge of over 2 feet that would occur over a 30-minute period starting just after 80 hours of the event, as a result of the emergency spillway breaching. The proposed project eliminates that projected surge since the new concrete spillway will not erode and breach.
5. In the 500-year flood case (Attachment 7) would overtop the existing fuse plug if the existing emergency spillway does not breach. The 500-year flood event assumed that the fuse plug failed 4 feet deeper than designed. The graph shows a similar downstream elevation profile as the 68,000 cfs case.

In reviewing these data, the proposed modifications will result in an overall reduction in projected downstream impacts as compared to the existing conditions. There will be no projected adverse impacts to downstream residents as a result of this project. In fact, there will be a reduction in the downstream impacts as a result of this project.

Following our meeting on October 30<sup>th</sup> at the Hopkins Generating Station where much of this information was discussed, you requested that we recap in this letter additional points that were presented at the meeting. These are outlined below.

**What is the relationship between the lake reaching 69.5 feet and when flooding commences on Crooked Road?**

The published floodstage for Crooked Road is 46.69 feet msl (22 feet gage). Between 47 and 49 feet msl (23 and 24 feet gage), Crooked Road become impassible and a number of the homes are

impacted. Based on the design and modeling information that the City has provided the District, flooding on Crooked Road will occur well before the lake reaches an elevation of 69.5 feet and water begins to flow over the proposed Ogee spillway. In fact, prior to water flowing over the proposed spillway, the modeling predicts the river level to be just below 50 feet msl or between 3 and 4 feet above floodstage.

**How does this flooding impact Highway 20 and where does it impact Highway 20?**

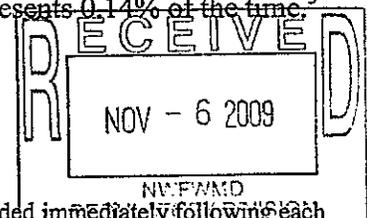
As the tailwater elevations increase, the west side approach to the Highway 20 bridge is impacted. Based on historical flood events since the City has assumed responsibility for operating the facility, this occurs when the downstream river elevation is in the neighborhood of 50 feet msl at the Bloxham gage station. As the downstream waters rise, they wrap back towards the facility around the fish camp located on the Liberty County side of the river and cover the approach to the Highway 20 bridge. (This has been observed since the City became leaseholder of the dam and hydroelectric facilities) It is important to note that based on the modeling for the proposed Ogee spillway, we would reach a downstream river level of approximately 50 feet msl prior to the lake level rising to 69.5 feet and water flowing over the proposed Ogee spillway.

**What were the lake and downstream river levels for the historical flood events that have occurred since the City has operated the facility?**

There have been three major flooding events since the City took operational responsibility for the facility. These occurred in October of 1994, Fall of 2008 (TS Fay), and Spring of 2009. The table below outlines the peak levels for the downstream river (Bloxham Gage) and Lake Talquin.<sup>1</sup>

Event	Peak River Level (feet msl)	Peak Lake Level (feet msl)
October 1994 <sup>2</sup>	50.92	69.52
Fall 2008 (TS Fay)	50.31	68.91
Spring 2009	50.88	69.27

As you can see, only in the October 1994 event would the lake level have reached the 69.5 crest elevation for the new Ogee spillway. In fact, in reviewing the USGS data for the mean high lake level for the period March 1985 through January 2009 (8703 daily records), there are only 12 days in which the mean lake level was at or above 69.5 feet. This represents 0.14% of the time.<sup>3</sup>



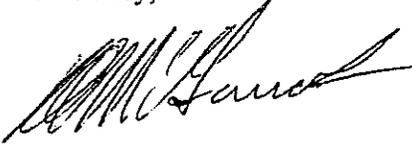
<sup>1</sup> Unless otherwise noted, the data were obtained from real time USGS data downloaded immediately following each event.

<sup>2</sup> October 1994 data represent the mean high reading for the lake and river from the USGS historical records

<sup>3</sup> Source – USGS Historical data for mean lake levels for March 295 through January 2009

I hope that this information addresses your questions. Because this project specifically is proposed to address safety considerations, the City looks forward to timely completion of the permitting process.

Yours truly,

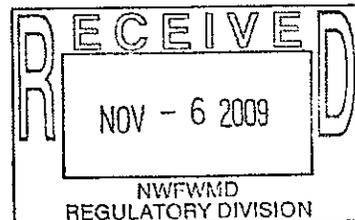


Robert McGarrah  
Manager – Power Production

Attachments

1. Mead & Hunt report dated November 4, 2009
2. City letter to FDEP dated October 28, 2009

Cc: Gordon King, w/o attachments  
Karl Bauer, w/o attachments  
Yiyong Xiong, Mead & Hunt, w/o attachments  
Corn Spillway Project File, w/ attachments



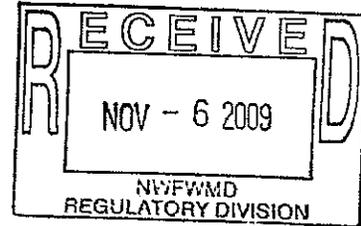


2602 Jackson Bluff Road, Tallahassee, Florida 32304, (850) 891-4YOU (4968), talgov.com

October 28, 2009

**VIA HAND DELIVERY**

Mr. Tom Franklin, Environmental Specialist III  
Florida Department of Environmental Protection  
Northwest District Branch Office  
630-3 Capital Circle NE  
Tallahassee, Florida 32301



RE: City of Tallahassee – Corn Hydro Spillway Modification  
Application 20-0296182-001-DF - Request for Additional Information – Item #3

Dear Mr. Franklin:

The City received your request for additional information (RAI) on October 19, 2009. In item 3 of the RAI, you requested the City to address six concerns identified in a memo to Charles Wagner at the FERC. This memo was not attached to your RAI, but we are presuming that you are referring to an e-mail sent from Tom Jacobs to Charles Wagner at the FERC's Atlanta Regional Office which we received through our permitting consultant.

This letter is to address item 3 of the RAI. At the end of this letter, I have addressed the six specific issues raised by Mr. Jacobs. For ease in addressing the issues, I have placed your specific question/issue in bold, followed by our response.

As you know, we recently received an objection letter concerning your project's proposed lowering of the spillway. Please provide a letter clearly stating and justifying that the lowering of the existing invert of the spillway by 2.5 feet will not increase the potential for flood damage to the houses downstream of the dam.

In addressing this request, I have provided some information concerning the design of the existing facility and the history of this project.

The existing facility is designed with an earthen emergency spillway and a fuse plug spillway located on the northern end of the existing earthen dam. The crest of the emergency spillway is at El. 72.3 feet, and the crest of the fuse plug spillway is at El. 74.3 feet. These two spillways are designed to allow for release of water from Lake Talquin in those flood events in which: (i) there is insufficient capacity to release the water through the existing floodgates and generating units; and (ii) the lake level reaches a level of 72.3 feet or above. The emergency spillway was designed to increase the total spillway capacity of the project by allowing overtopping flow without erosion. The fuse plug spillway was originally designed to allow for erosion to occur, during periods where there is water flow over the

crest, such that the fuse plug spillway crest would drop to 68.3 feet (1.2 foot lower than the proposed Ogee spillway). In May 2003, a similarly designed facility in Michigan had a failure of their fuse plug spillway that resulted in a significant release of water downstream. In that failure, the fuse plug spillway eroded farther than designed which resulted in the uncontrolled release of water. As a result of that failure, the FERC requested the City perform geotechnical studies to determine if the soils located in our emergency and fuse plug spillways were similar in nature. Based on the geotechnical study performed by the City, our engineers identified that the soils in the Corn facility emergency and fuse plug spillways were such that, if water were allowed to flow over these structures, there would be a high probability that both the emergency spillway and the fuse plug spillway would **NOT** operate as designed, resulting in significant erosion and an uncontrolled release of water from Lake Talquin.

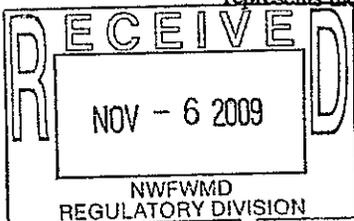
Based on this analysis, the City was directed by FERC to identify proposed modifications that would address this potential failure mode. The Ogee spillway that has been proposed for the facility is the most cost effective, least environmentally impacting, alternative that met the FERC Engineering Guidelines. The crest of the proposed Ogee spillway is at El. 69.5 feet and will not pass any flow under floods less than the 50-year flood.

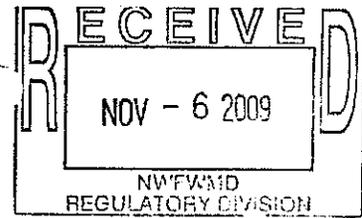
Attached you will find a set of graphs (Attachment 1) prepared by the City's engineer that depicts maximum river elevations at three locations and the maximum dam outflow versus various inflows to Lake Talquin.<sup>1</sup> The river level elevations are in feet MSL and the flows are shown as 1000 cubic feet per second (cfs). The three locations are the headwater of the dam, the tailwater, and Crooked Road, which is located approximately 0.7 miles downstream from the dam. These graphs compare the maximum dam outflow and river elevations for the existing design and the new spillway design.

The first graph in Attachment 1 shows that the maximum outflow for the proposed new spillway design is slightly lower than that for the existing design under most of the inflow conditions except for the 100-year flood. Under the 100-year flood, the maximum outflow for the proposed new spillway design is approximately 3,100 cfs higher than that for the existing design, which results in an increase of 0.22 feet in the maximum river elevations at both the tailwater (graph 3) and Crooked Road locations (graph 4). However, any increase in the downstream river level does not occur until it is above El. 51 (see Attachment 2), which is 4.3 feet above the published flood stage of 22 feet (46.69 feet msl).

The second graph in Attachment 1 shows that the headwater elevation for the existing design is either the same or higher than that for the proposed new spillway design under all inflow conditions. Under the 100-year flood, the difference is the greatest, which is 0.85 feet. For the existing design, the headwater elevation is at El. 72, which is only 0.3 feet

<sup>1</sup> To convert from river elevation to river stage, you must subtract 24.69 feet from the river elevation. This represents the elevation of the downstream river gauging station.





lower than the crest of the emergency spillway. A dam failure is more likely to occur when the headwater elevation is higher.

Based on the geotechnical investigation performed by the City, it is not valid to compare the Ogee spillway releases with the original emergency spillway releases. This is due to the high probability that the emergency spillway will fail similar to the failure that occurred in Michigan, resulting in a significant uncontrolled release of water downstream.

The emergency spillway is overtopped at an inflow of 68,000 cfs. Attachment 3 shows the water surface elevation and flow versus time under a flood peaking at 68,000 cfs, assuming the emergency spillway fails at the time of overtopping. The breach depth was assumed to be 26.3 feet (similar to that for the 1957 dam failure) and the average breach width was assumed to be 131 feet (5 times breach depth). The graphs in Attachment 3 show that the downstream river level for the existing condition will be approximately 2 feet higher than that for the proposed design, if a failure would occur at the emergency spillway. The flow for the existing condition will be over 40,000 cfs higher than that for the proposed condition.

The fuse plug spillway is overtopped at the 500-year flood. Attachment 4 shows the water surface elevation and flow versus time under the 500-year flood, assuming the fuse plug spillway fails 4 feet deeper than its designed level of 68.3 feet. The graphs in Attachment 4 show that the downstream river level for the existing condition will be approximately 0.5 feet higher than that for the proposed design, if the fuse plug fails deeper than designed. The flow for the existing condition will be over 20,000 cfs higher than that for the proposed condition.

It is important to note that the actual breach of either the emergency spillway or the fuse plug could be worse than what was assumed in the two cases above due to erodability of the soils in these two structures.

In our response letter dated September 17, 2009, to Northwest Florida Water Management District (NWFWMR), two graphs were included to show the inflow-outflow and the inflow-tailwater level relationships under the IDF (50% PMF) condition (Attachment 5). These graphs compare the two relationships for the existing and proposed designs. These graphs were developed using manual reservoir routing method and the inflow condition was assumed to be simplified linear increasing flow peaking at the IDF. In these graphs, they show a potential for a 0.83-foot increase in the tailwater level (meaning that the tailwater level would be 0.83 feet higher) for the proposed design when the inflow reaches approximately 96,000 cfs, under the simplified IDF inflow condition. This method represented a simplified worse case analysis. The information contained in Attachments 1-4 represent more detailed modeling results and refines the different conditions. As noted above, you will see that this more detailed modeling has identified that the earlier difference was overstated.

There are several additional points that are important to consider:

- Utilization of the proposed Ogee spillway will result in a predictable controlled capacity release versus an unpredictable uncontrolled release of water from Lake Talquin.
- Utilization of the proposed Ogee spillway results in the lake and river levels to return to more normal conditions immediately following the flood event. In the case of a failed emergency spillway or deeper failure of the fuse plug, while the earthen structure was rebuilt, there would be a long period of time in which the lake and river level would not be at normal levels.
- Any increase of the downstream river level under the proposed design would not occur until it is already >4 feet above the published flood stage of 22 feet (46.69 feet msl).

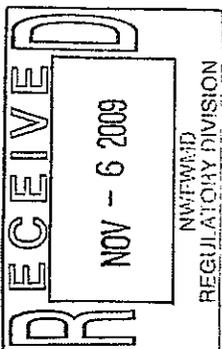
A question could be raised about why the proposed Ogee spillway could not be raised to 72 feet. We have discussed this with our engineer and offer the following observations:

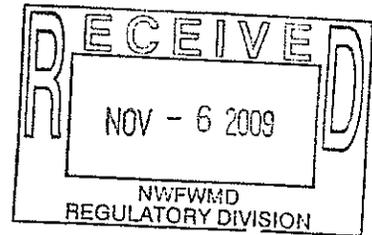
- As noted above, the emergency spillway is subject to failure at overtopping due to erodability of the soil. The bottom elevation of the failure is unpredictable, but can be significantly lower than 69.5 feet. This means that comparing the 69.5-foot elevation of the Ogee spillway to the 72.3-foot elevation of the emergency spillway crest is not a valid comparison.
- To raise the Ogee spillway to 72 feet would require a significantly longer structure. In addition to the significant increase in cost, there would be a need to clear a significant amount of the forest downstream of the earthen dam to allow for a clear flow path.

Based on this information, we believe that the proposed Ogee spillway is the prudent modification to address the dam safety concerns that have been identified. I think it is important to stress that the City is pursuing the project solely for the purpose of reducing the potential impacts to downstream residents and the environment. In addition, it is important to note that, for safety reasons, the construction of the Ogee spillway must occur outside of the annual hurricane season. The proposed construction schedule is approximately 7 months.

- 1 **Lack of Public Notice.** I have not received a single "legal" notice of a public meeting. I was flooded out of my house in August of 2008. The notice for the last "public information meeting" came in the form of an un-stamped flyer put in my mailbox (I made a formal complaint to the post master regarding this). I have not checked that mailbox in over a year. Many of the owners on the road are not full time residents. Many of the neighbors I have spoken to so far (about 6 families) are completely unaware of the project.

There have been no activities performed to date that would require a "legal" notice to be provided. When an activity occurs that requires a legal notice to be filed, this will





be done in accordance with the applicable rules and regulations. We think it is important to note that while Mr. Jacobs has indicated he has had no legal notice, he was involved in the initial permitting activities for this project while he was employed by one of the City's consultants on this project.

The unstamped flyer that is referenced in Mr. Jacob's question is likely referring to flyers the City distributed to announce a public open house to discuss this proposed modification. This public meeting was held on September 22 at the Ft. Braden Community Center. Members of the City's project team were available to meet with interested citizens concerning this project. This community meeting, while not required by any rule or regulation, was held by the City in an attempt to provide factual and accurate information concerning the project. Mr. Jacobs attended this meeting and was afforded a significant amount of time to talk to the City's lead design engineer.

- 2 **Increased volume and frequency of storm events.** The project engineer told me, and it was verified with the Northwest Florida Water Management District, that the project would lower the spillway elevation from 72.0' msl to 69.5' msl, a reduction of 2.5'. By the engineer's own correspondence it is apparent that this will allow/cause additional flooding above flood stage than the existing condition. It should be known that even a small increase in floodwater elevation creates exponentially more damage.

We do not agree that there will be exponentially more damage downstream as a result of the installation of the Ogee spillway. In fact, as noted above, the installation of the proposed Ogee spillway will result in the reduction of potential damage due to the predictable nature of the water releases versus an uncontrolled release of water from the lake. This predictability provides for a gradual increase in the river level versus a sudden increase. A sudden uncontrolled release would result in significantly more physical and environmental damage downstream as well as a limited notification period. Under most inflow conditions, the downstream river level will be improved with the Ogee. Even under rare inflow conditions (100-year flood) when the maximum downstream river level is worsened with the Ogee spillway design, the increase in the maximum river level is less than 3 inches.

In a related note, Mr. Jacobs has previously raised concerns that the installation of the Ogee spillway will also result in an increased frequency in flooding. This is not correct. It is the City's practice not to allow Lake Talquin to rise significantly above the normal pool elevation (68.5 feet) during flooding events. There will be no change in the City's standard operating procedures with the installation of the Ogee spillway. As a result, there will typically not be any water flowing over the proposed Ogee spillway until the following conditions have been met: (i) the existing flood gates are 100% open; (ii) the inflows are in excess of what can be released from the existing flood gates and units; and (iii) the lake level will have to rise to 69.5 feet or

above. When these conditions have been met, the downstream river levels will already be >4 feet above the published flood stage level of 22 feet (46.69 feet MSL).

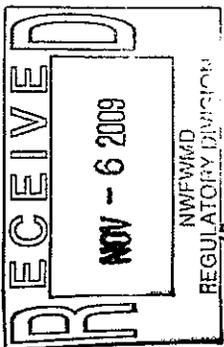
- 3 **Scour.** One of the residents has expressed concern over the location of the new spillway. He states that he has a 14' deep hole in front of his house due to scour and believes the project will cause more damage.

We are addressing the location of the proposed Ogee spillway in this answer. The scouring issue is addressed in response to issue 4 below. The new spillway has been located in a position along the existing earthen dam that results in the capacities needed to meet the FERC Engineering Guidelines and minimizes the impacts to the environment. Locating the proposed Ogee spillway at any other location along the length of the existing earthen dam would result in the need to remove significant existing trees and vegetation to allow for either natural sheet flow of the water to the river or the installation of a concrete flow path to the river. In addition, there would be no difference in the flows, velocities or river levels if the proposed Ogee spillway were relocated to a new location along the existing earthen dam.

- 4 **Over-all Scour.** The existing system, as designed, causes scour in the river, particularly in high water. The increase in flood volume and frequency will exacerbate the scouring conditions. It is difficult to quantify this environmental impact because it is so expansive, however; I believe this issue needs much closer scrutiny.

We agree that there is scouring when there are high water events, but the addition of the proposed Ogee spillway will not increase the scouring that occurs during flooding events. Scouring during flooding events is a natural occurrence and is the result of the level and velocities of the downstream river. There will be no change in downstream river levels or flows in flooding events prior to water flowing over the proposed Ogee spillway. In those cases where there is water flowing over the proposed Ogee spillway, the addition of the proposed Ogee spillway will eliminate the potential of significant increased scouring downstream that would occur in the event of a failure of the existing earthen emergency spillway and fuse plug. Downstream velocities will not change as a result of the Ogee spillway being added. The Ogee spillway is designed such that the worse case velocity of the water leaving the stilling basis will be between 0.25 feet per second (fps) (50-year flood) and 8.3 fps (inflow design flood of 154,500 cfs). This is significantly below the velocity of the water leaving the existing spillway structure during these events (7.6 fps and 10.2 fps, respectively).

**Endangered species.** There is an endangered mussel named the purple bank-climber (*Elliptioideus sloatianus*) that resides immediately below the dam and is directly in harm's way. We would like to know if there has been any type of impact assessment on this or any other protected mussels in the river.



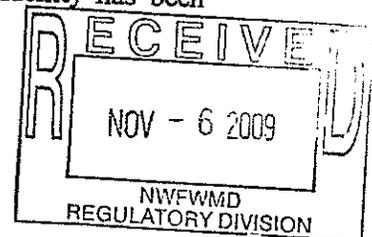
In consultations with ENTRIX Inc., the City's permitting consultant, and Mead & Hunt, Inc., we offer the following information on this issue.

The purple bankclimber (*Elliptoideus sloatianus*) is a federally protected (Threatened) freshwater mussel known to occur in four major river systems throughout the southeast including the Ochlockonee River in northern Florida. Based on information compiled at the US Fish and Wildlife Service, this mussel is not known to reside immediately below the dam, but is found to reside approximately eight miles south of the dam. Nevertheless, the designated critical habitat within this river extends from the Jackson Bluff Dam southward to the confluence with Syfrett Creek in Wakulla County. This species prefers muddy sand habitat located within the main channel and is often found at depths exceeding 3 meters (9 feet). Spawning occurs during the winter and early spring months. A primary host fish has not been identified but several common fish species are known to serve as secondary hosts. Primary threats to survival include non-point source pollutants, sedimentation, and interrupted spawning success.

The construction and/or function of the proposed auxiliary spillway at Jackson Bluff Dam will have no effect on the habitat availability or overall survivorship of the purple bankclimber within the lower Ochlockonee River. First, there are no construction activities proposed within the Ochlockonee River proper, thus there will be no direct contact between construction machinery/materials with mussels or mussel habitat. Second, erosion control measures (e.g., silt fence, turbidity curtains, etc.) will be erected and maintained to prevent sedimentation of downstream habitat. Third, flood events will remain dependent on rainfall and the frequency of flooding during spawn will not be affected by the proposed construction. Finally, the volume and velocity of water exiting the proposed stilling basin will be substantially lower than that exiting the gated spillways. For example, during a 50-year flood event, the estimated water velocity exiting the stilling basin would be 0.25 feet/second compared with 7.6 feet/second issued from the spillway. Furthermore, under inflow design flood conditions (i.e.: 154,000 cfs) water exiting the proposed stilling basin would be 8.3 fps compared with 10.2 fps exiting the gated spillway.

- 6 **Public health, safety and welfare.** This project as proposed appears to increase flooding volume and frequency. The Ochlockonee River is volatile and a lot of debris is dislodged during high water. I have personally seen enormous trees and parts of buildings floating down the river. ANY increase in volume and/or frequency is anticipated to increase the debris load. This debris is dangerous to not only people but structures as well.

The City believes that the proposed Ogee spillway does not increase the flooding volume or frequency as alleged by Mr. Jacobs. The proposed facility has been



designed to address the dam safety issues identified in conjunction with the FERC and to minimize the impacts on the downstream residents and the environment.

In closing, I need to reiterate that this project is being pursued to address a dam safety issue that has been identified. In order to safely make the proposed modifications, we must perform the work outside of the hurricane season. To have adequate time to perform the required construction activities, we must commence construction as soon as possible. Failure to do so will result in the construction activities being delayed until the fall of 2010. This delay exposes the downstream residents to additional risk of failure of the emergency spillway.

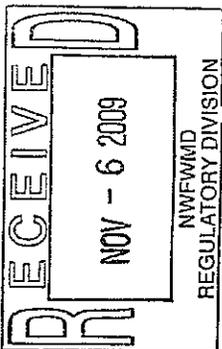
Yours truly,



Robert E. McGarrah  
Manager - Production

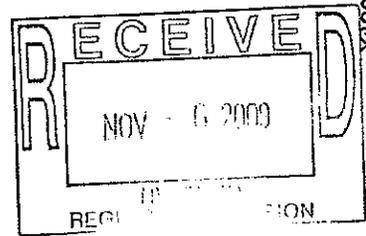
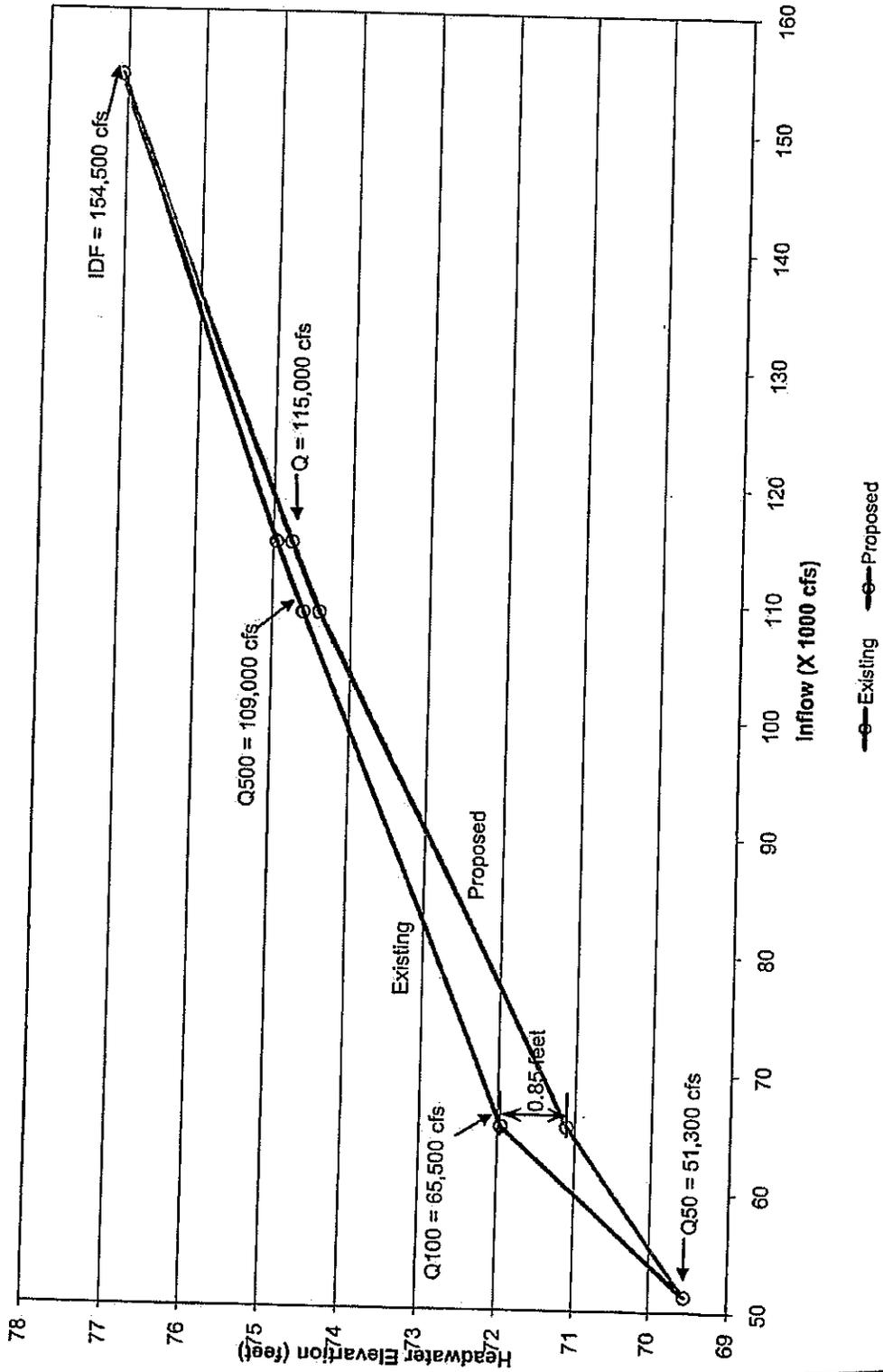
Attachments

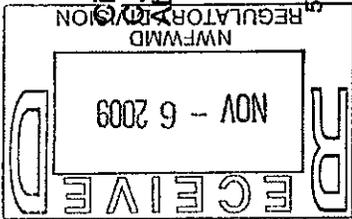
Cc: Charles Wagner, FERC - Atlanta  
Gordon King  
Karl Bauer  
Jim Alves, Hopping, Green and Sams  
Com Hydro Spillway Project File



City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 1 - Inflow vs. Outflow and Tailwater Elevation

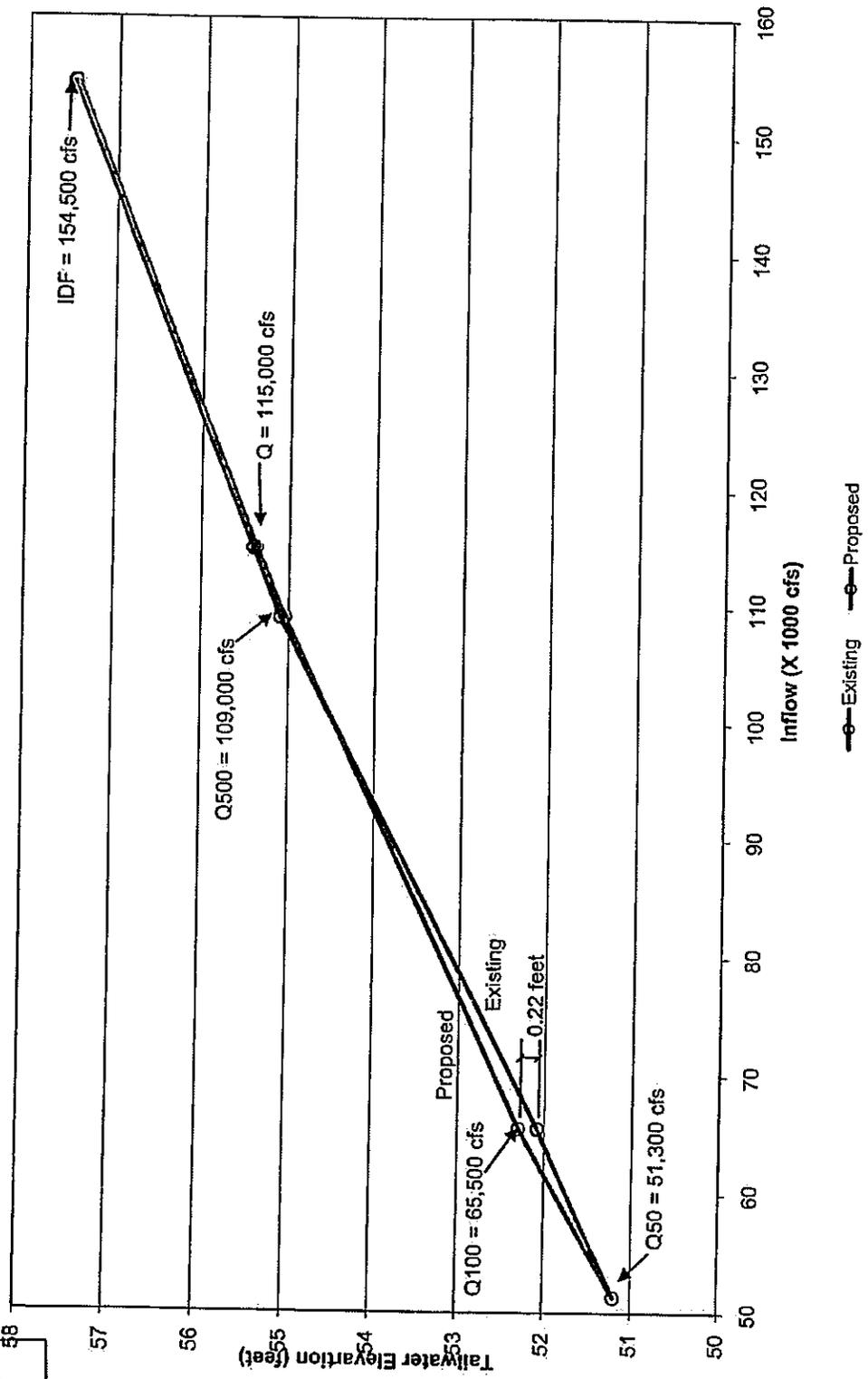
Jackson Bluff Dam  
 Inflow vs. Headwater Elevation





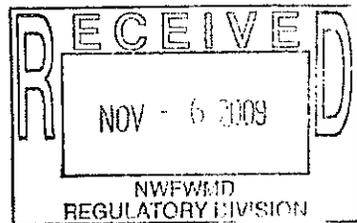
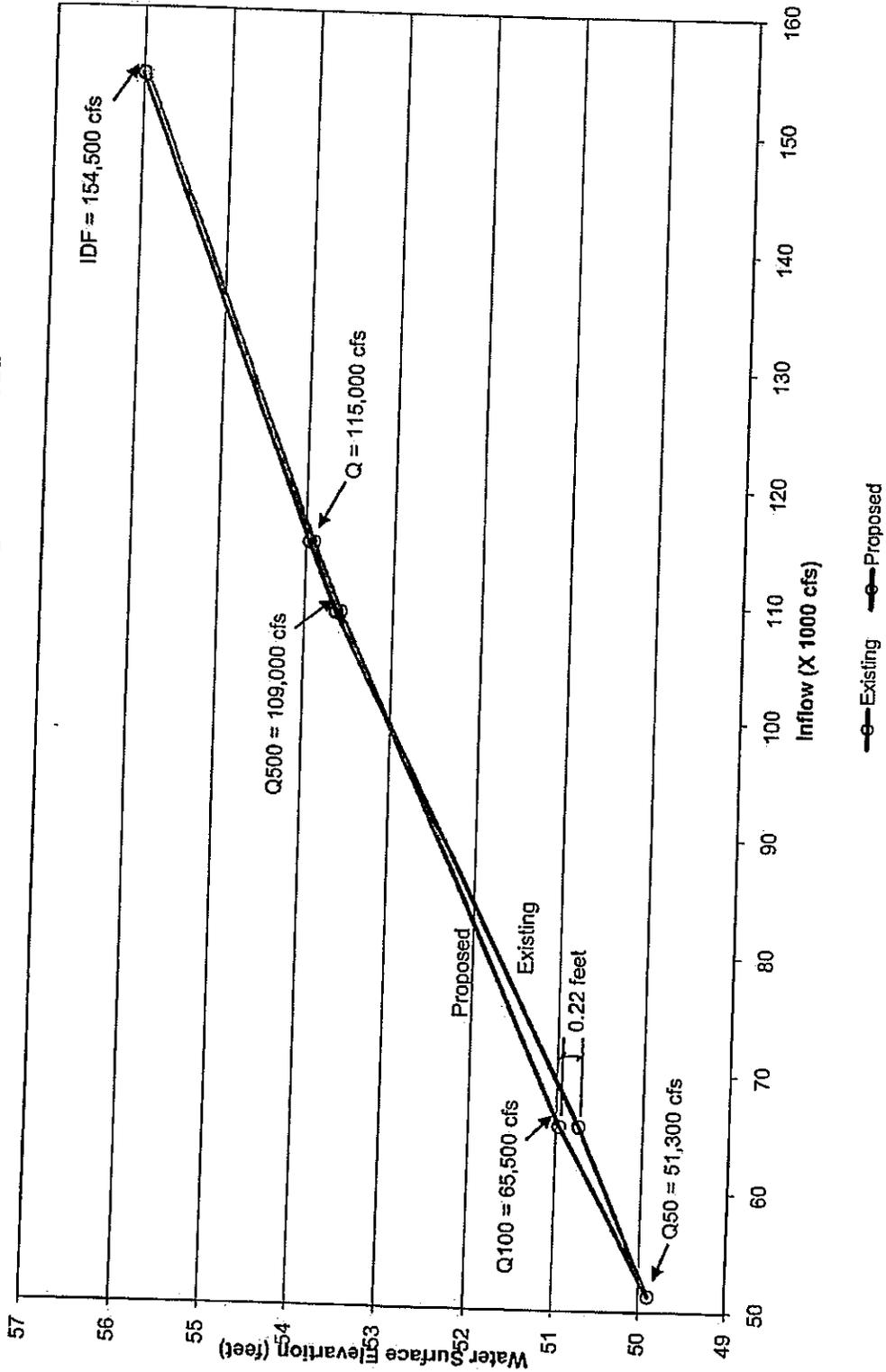
City of Tallahassee  
H. Cohn Hydro Facility  
Attachment 1 - Inflow vs. Outflow and Tailwater Elevation

**Jackson Bluff Dam  
Inflow vs. Tailwater Elevation**

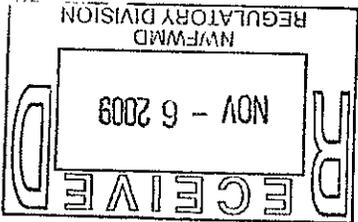


City of Tallahassee  
 C. H. Com Hydro Facility  
 Attachment 1 - Inflow vs. Outflow and Tailwater Elevation

Jackson Bluff Dam  
 Inflow vs. Water Surface Elevation @ Crooked Road

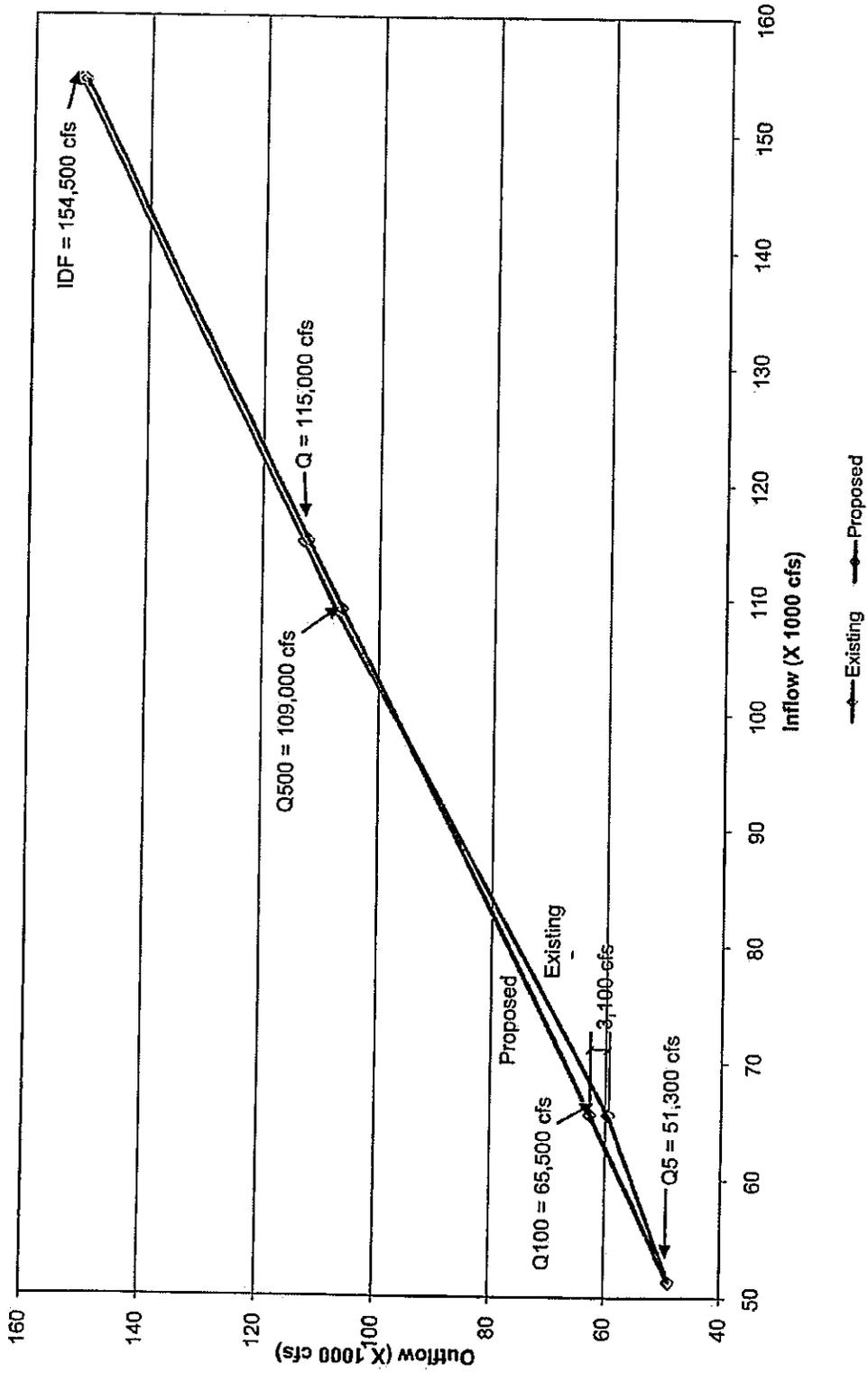


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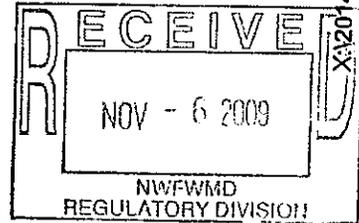
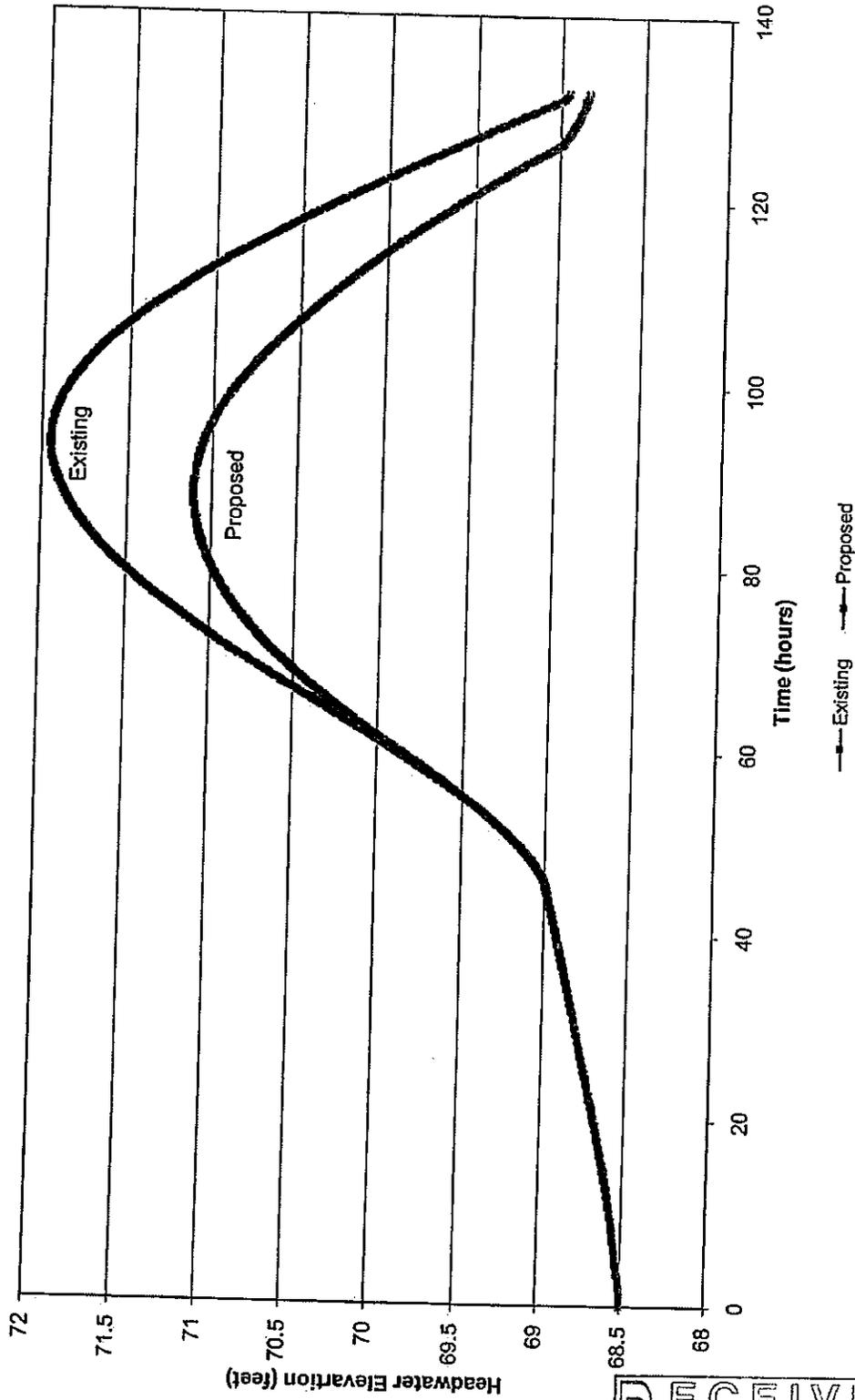
City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 1 - Inflow vs. Outflow and Tailwater Elevation

Jackson Bluff Dam  
 Inflow vs. Outflow



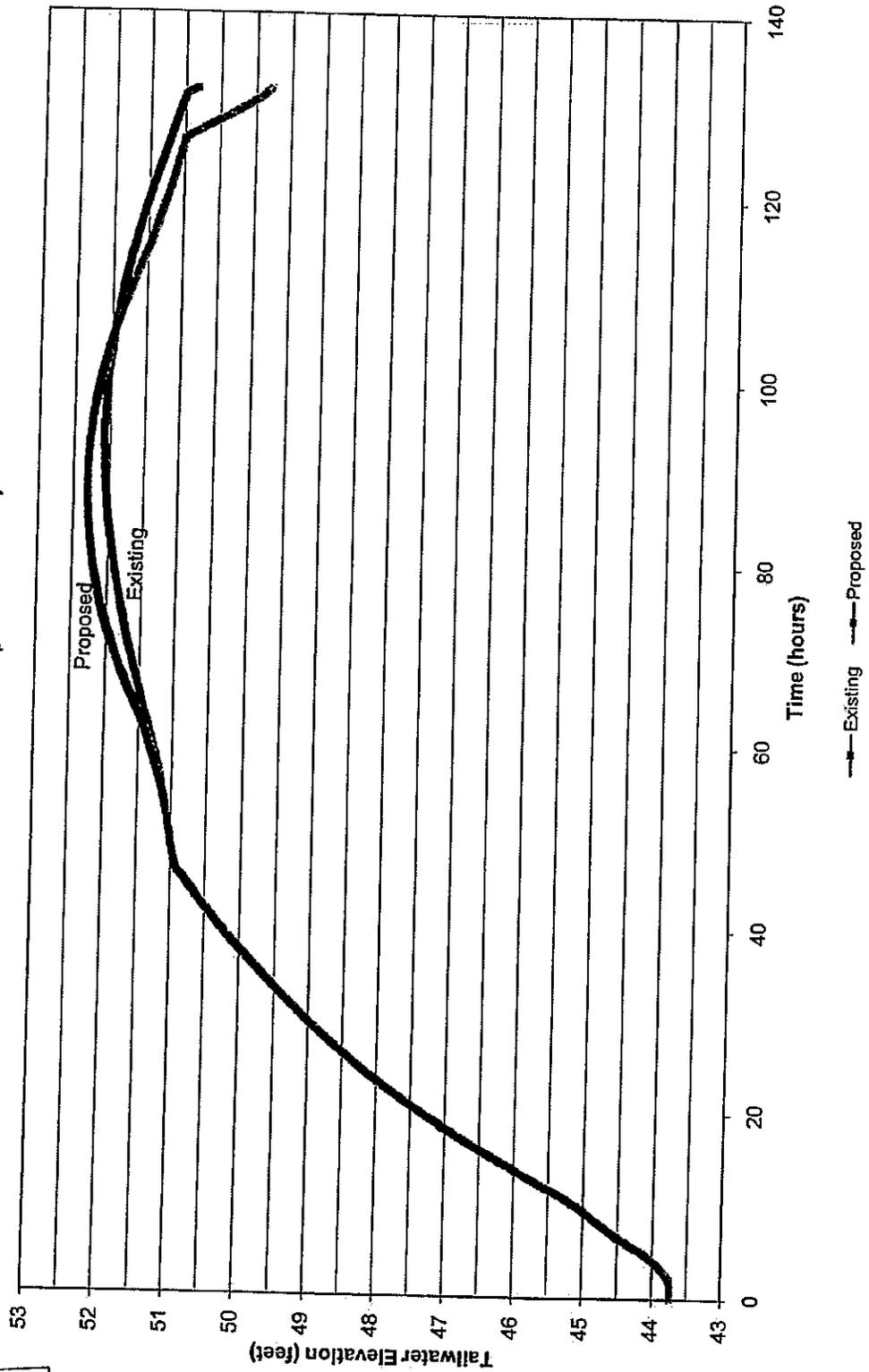
City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2 - Hydrographs for 100-Year Flood Condition

Headwater Elevation vs. Time  
100-Year Flood ( $Q_p = 65,500$  cfs)

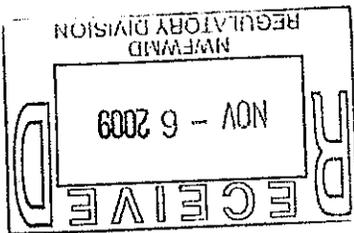


City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 2 - Hydrographs for 100-Year Flood Condition

Tailwater Elevation vs. Time  
 100-Year Flood ( $Q_p = 65,500$  cfs)

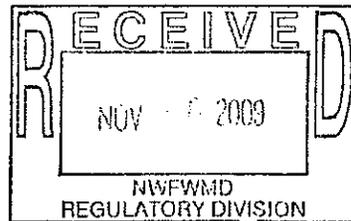
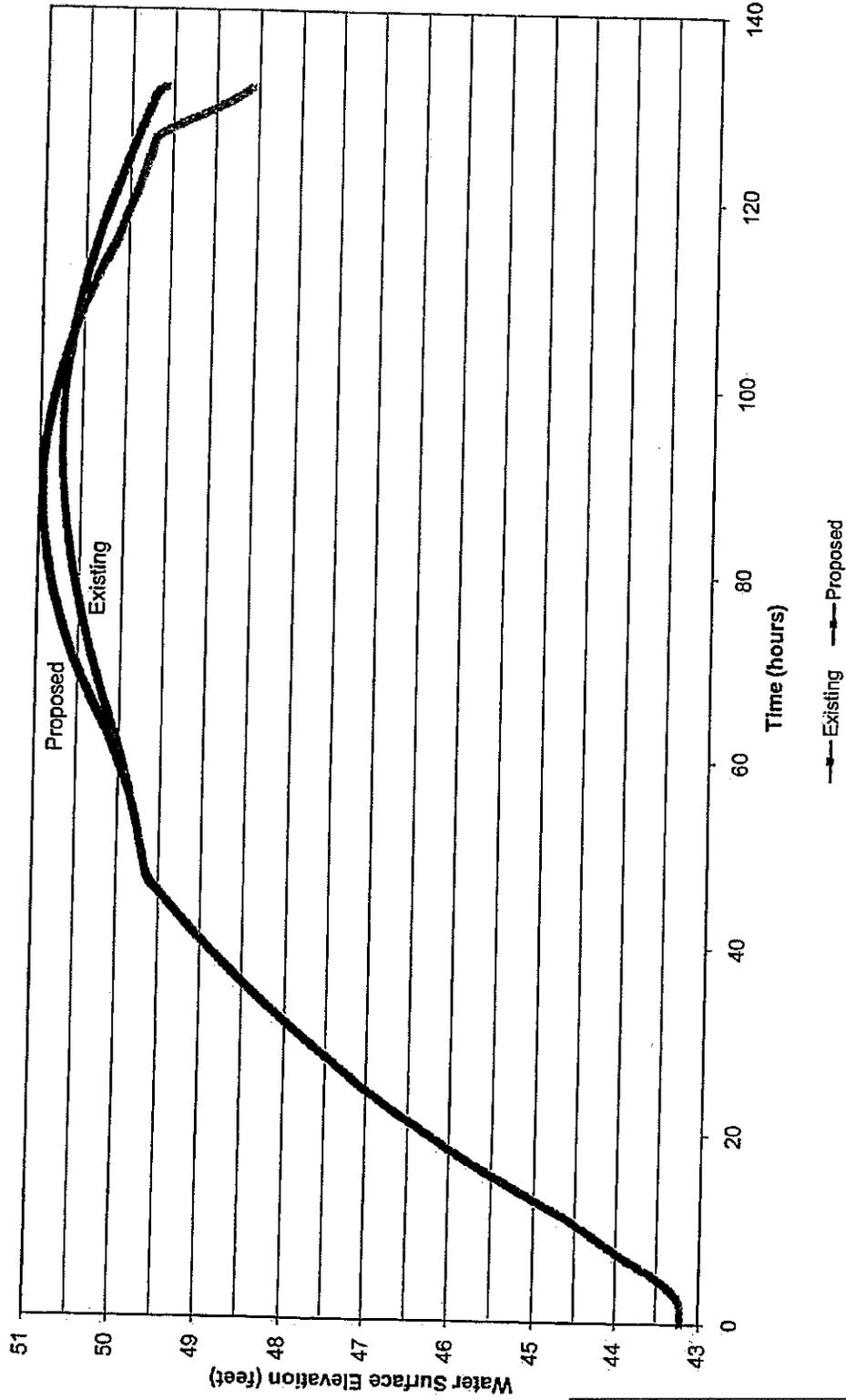


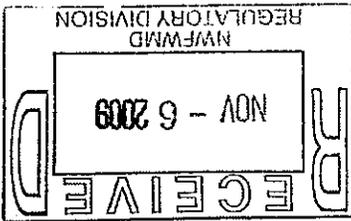
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City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2 - Hydrographs for 100-Year Flood Condition

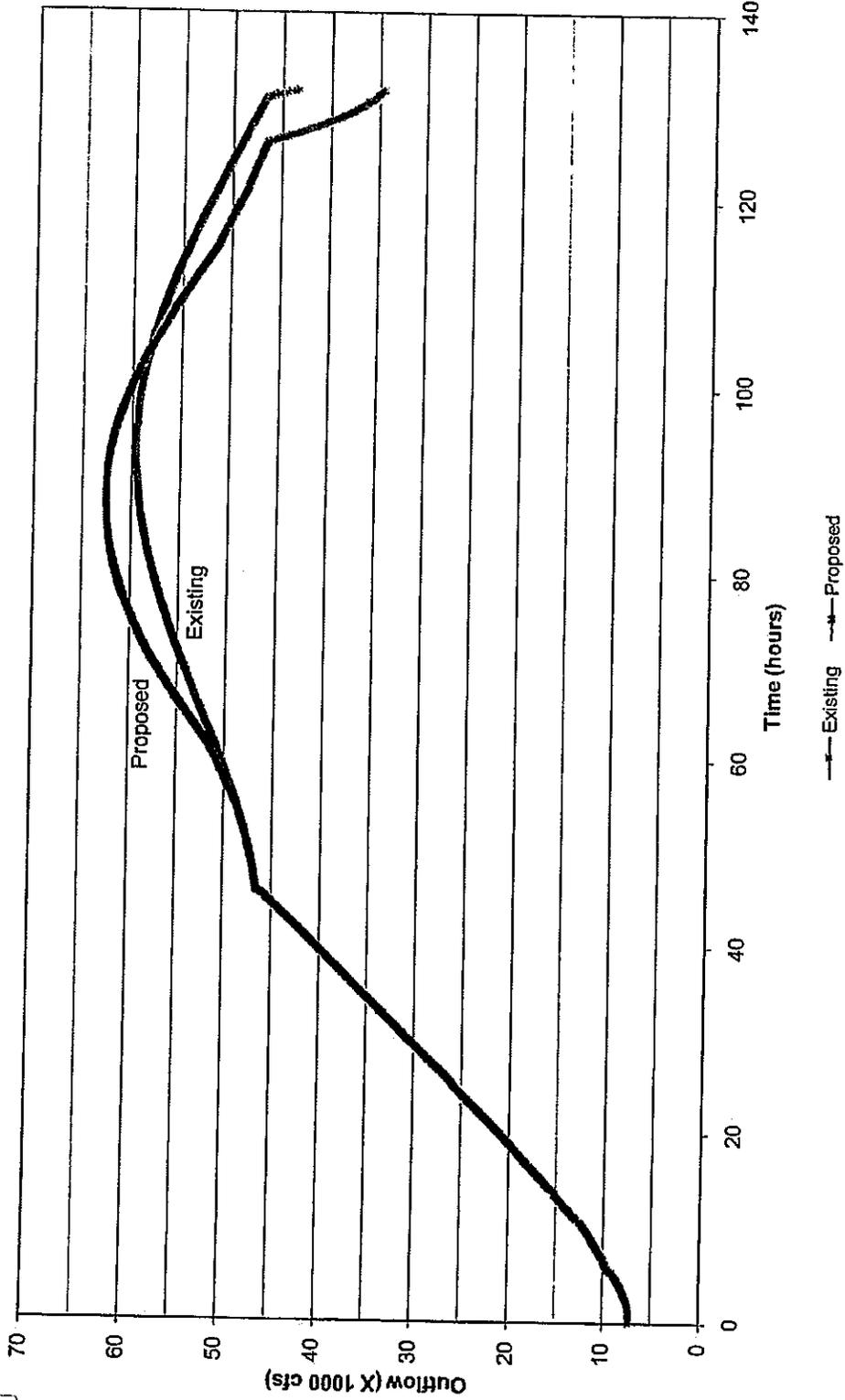
Water Surface Elevation vs. Time @ Crooked Rd.  
100-Year Flood ( $Q_p = 65,500$  cfs)





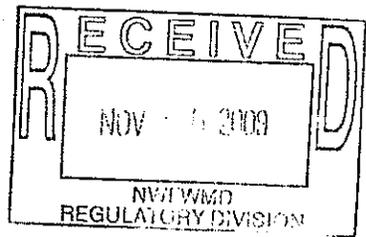
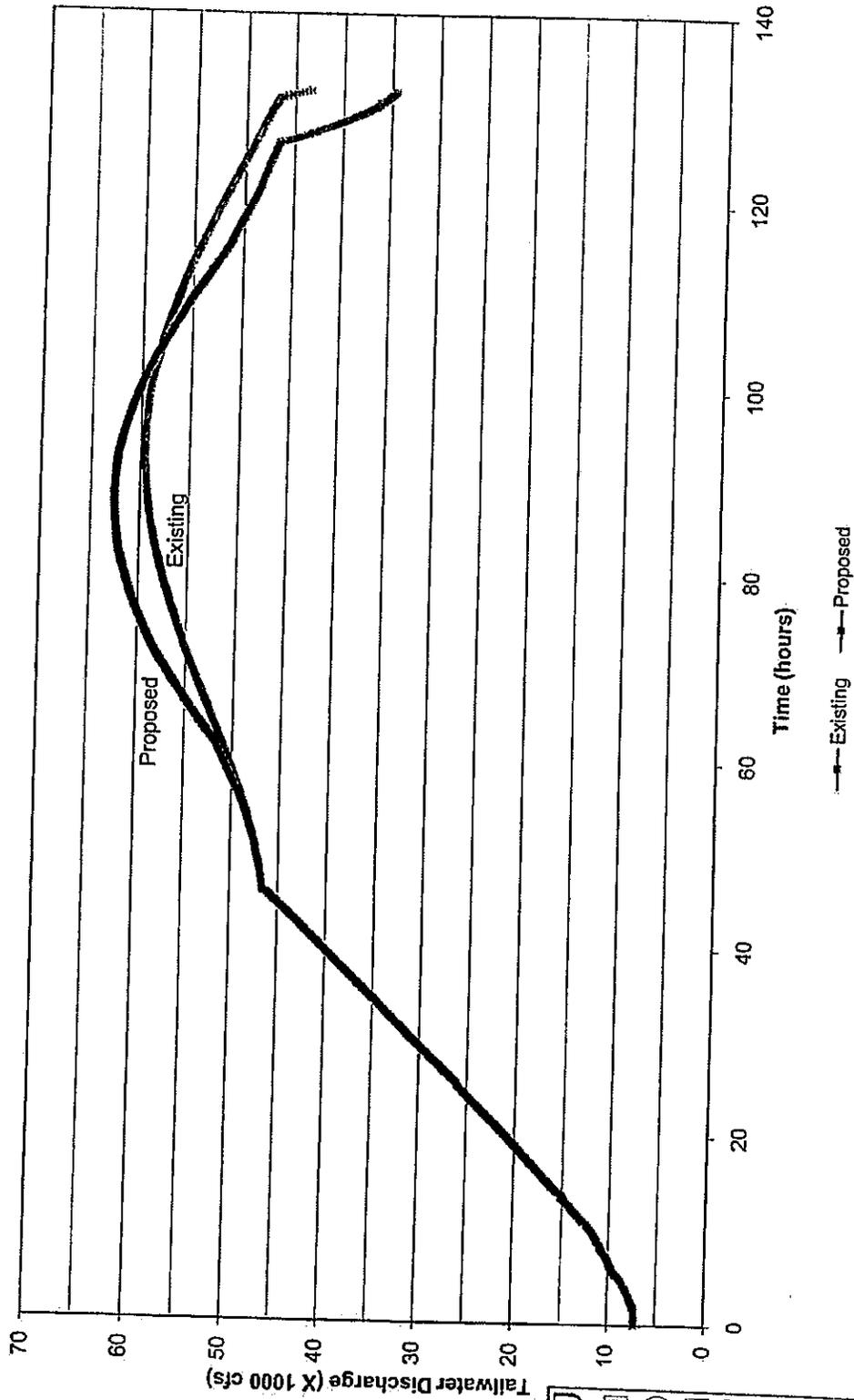
City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2 - Hydrographs for 100-Year Flood Condition

**Dam Outflow vs. Time**  
**100-Year Flood ( $Q_p = 65,500$  cfs)**



City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2 - Hydrographs for 100-Year Flood Condition

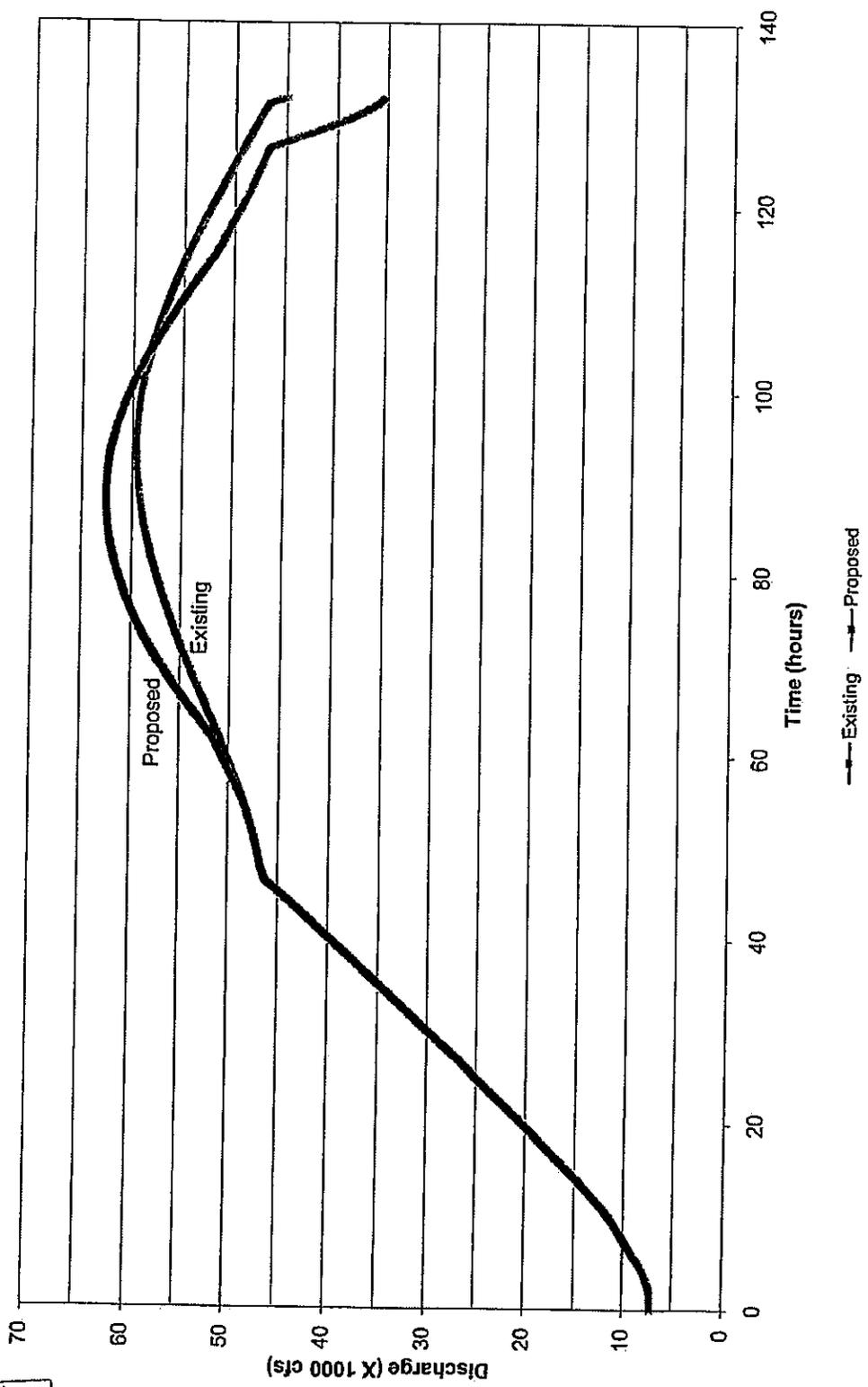
Tailwater Discharge vs. Time  
100-Year Flood ( $Q_p = 65,500$  cfs)



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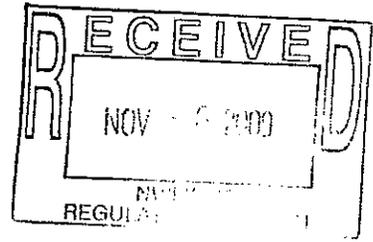
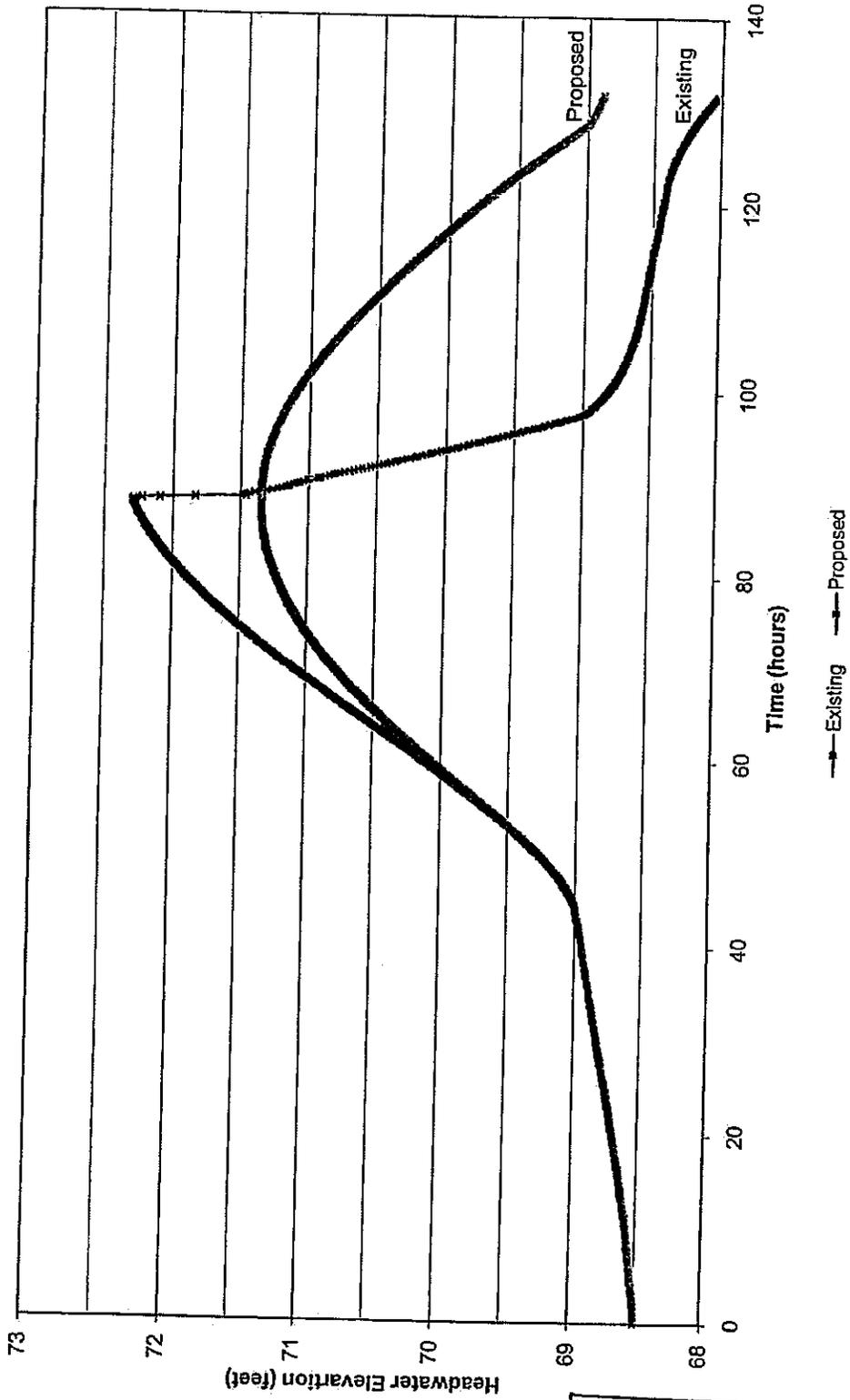
City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 2 - Hydrographs for 100-Year Flood Condition

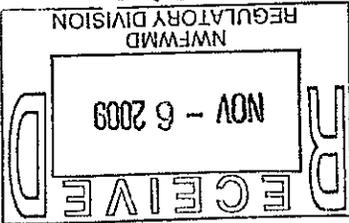
Discharge vs. Time @ Crooked Rd.  
 100-Year Flood ( $Q_p = 65,500$  cfs)



City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 3 - Hydrographs for Inflow = 68,000 cfs  
Emergency Spillway Breach

**Headwater Elevation vs. Time**  
 **$Q_p = 68,000$  cfs**  
(Assumption: Emergency spillway breaches at overtopping.)



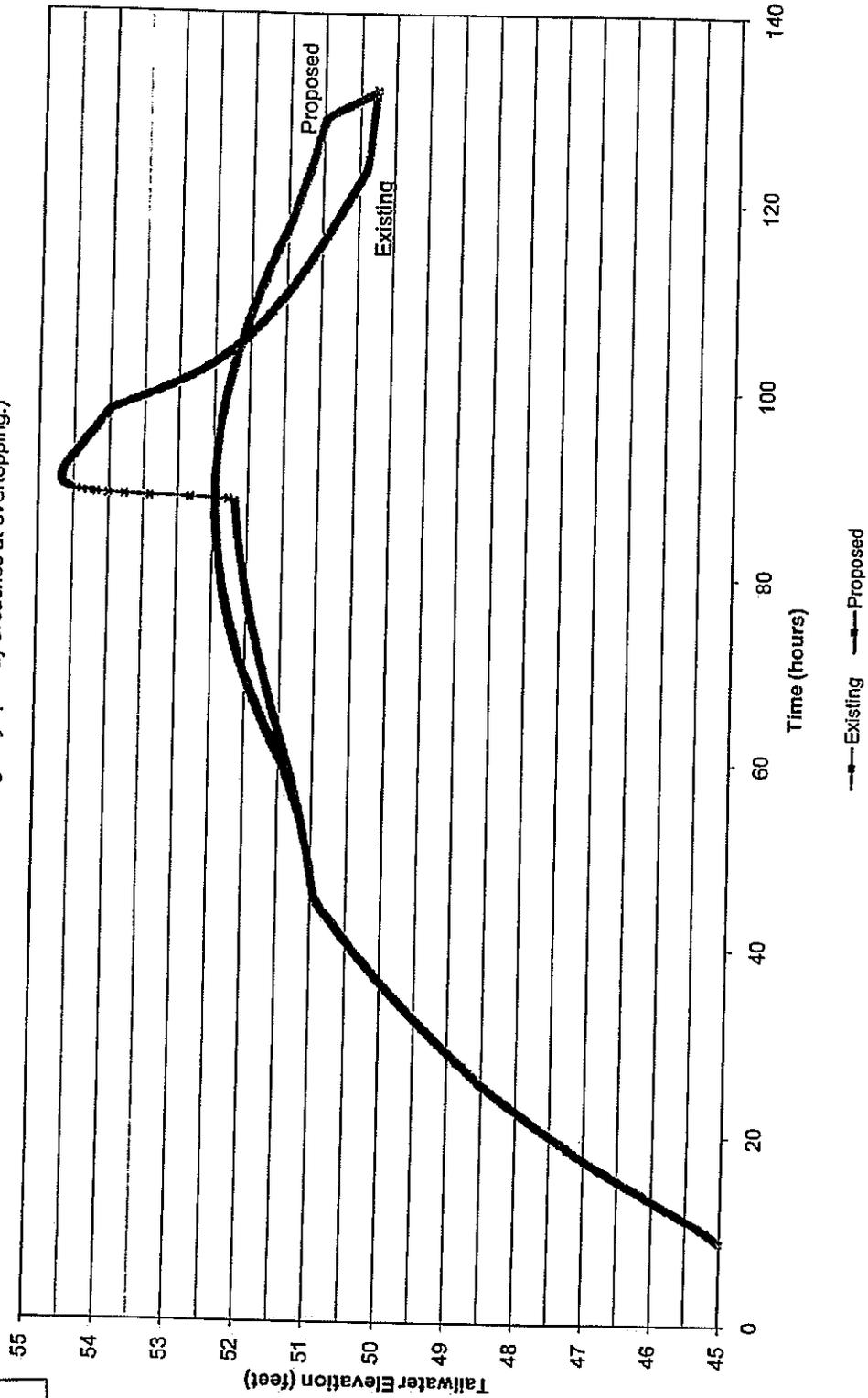


City of Tallahassee  
C. H. Corn Hydro Facility  
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Emergency Spillway Breach

**Tailwater Elevation vs. Time**

**$Q_p = 68,000$  cfs**

(Assumption: Emergency spillway breaches at overtopping.)

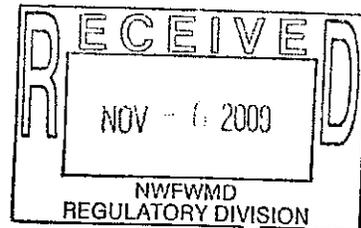
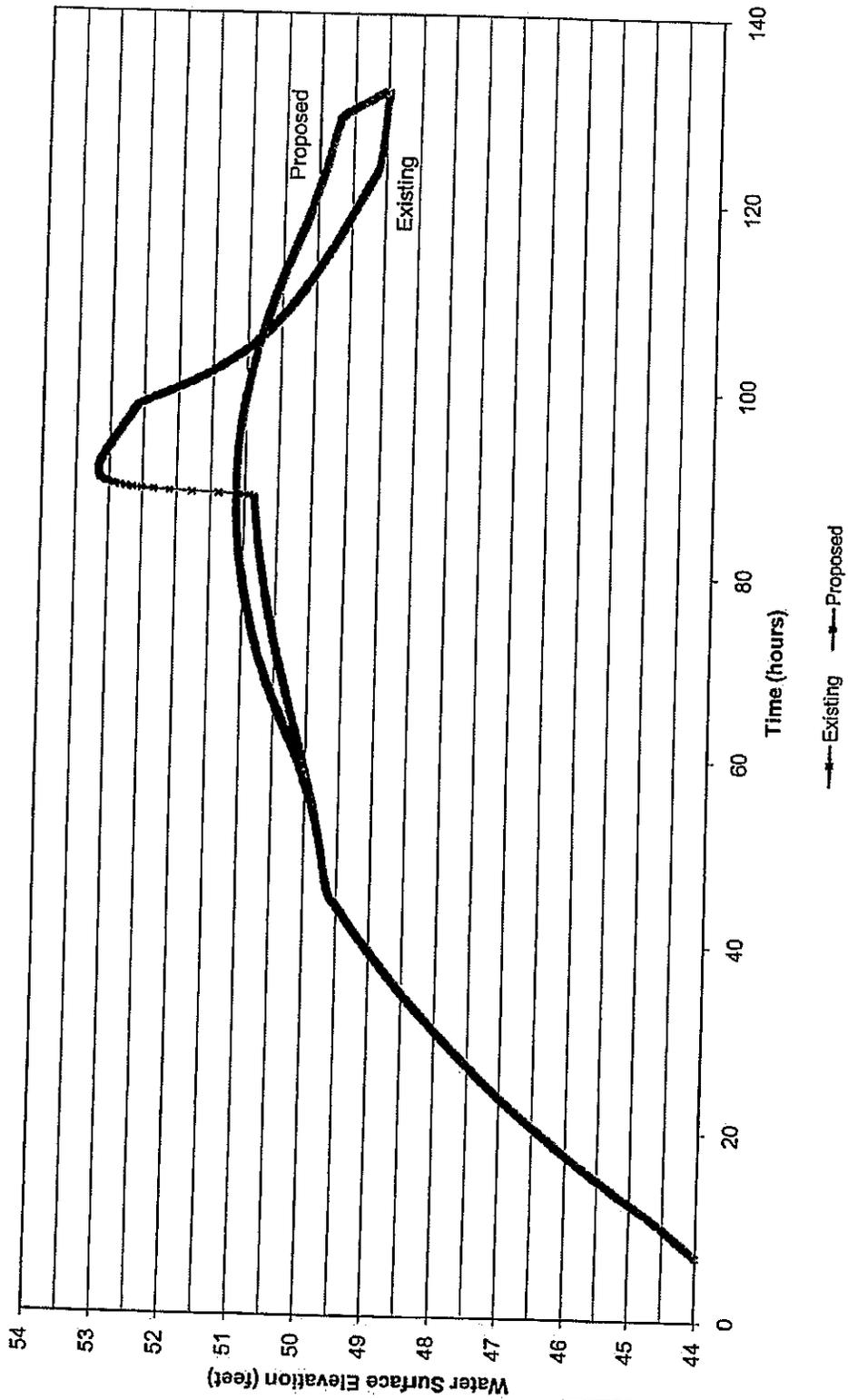


City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 3 - Hydrographs for Inflow = 68,000 cfs  
Emergency Spillway Breach

**Water Surface Elevation vs. Time @ Crooked Rd.**

**$Q_p = 68,000$  cfs**

(Assumption: Emergency spillway breaches at overtopping.)



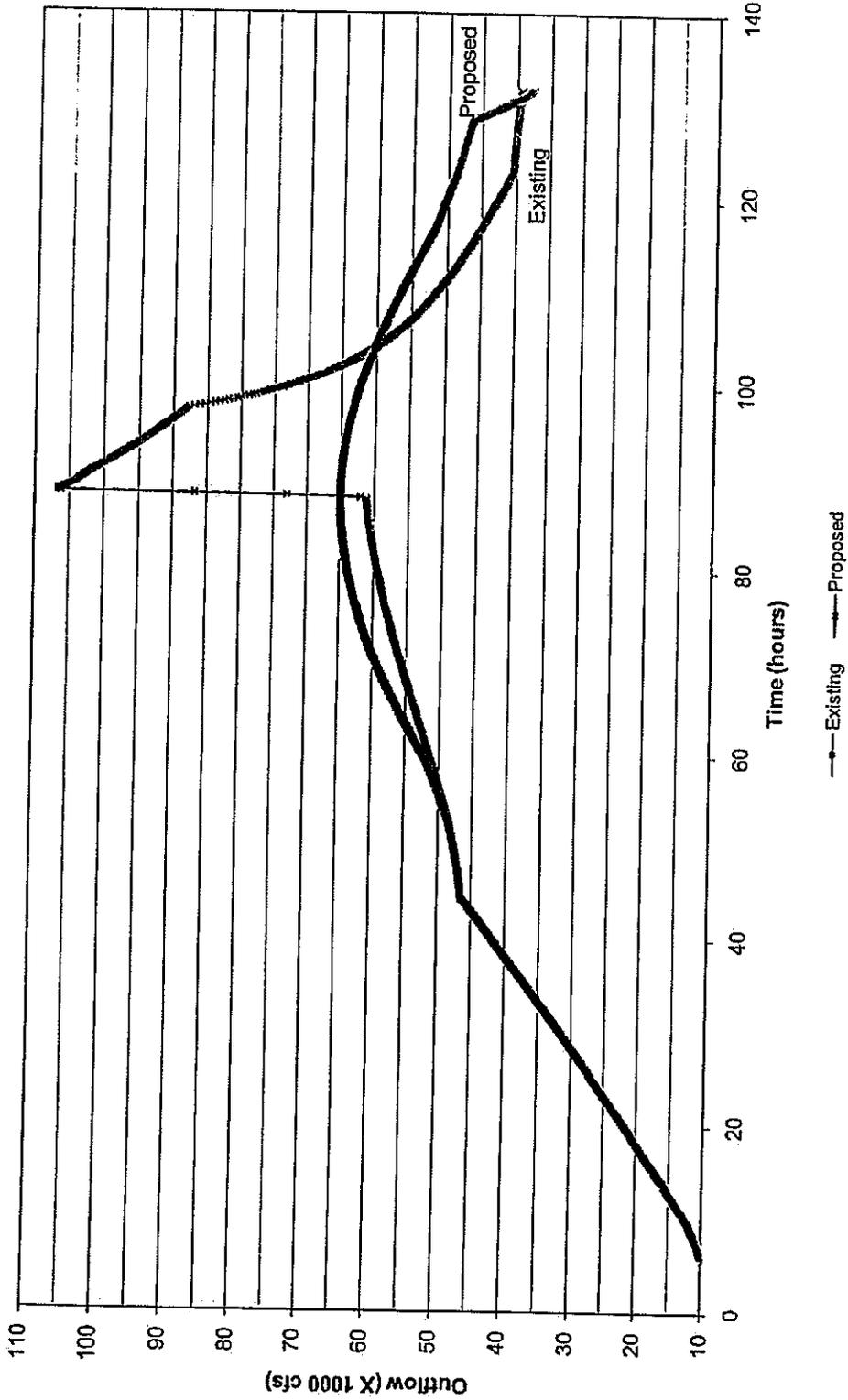
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City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 3 - Hydrographs for Inflow = 68,000 cfs  
 Emergency Spillway Breach

**Dam Outflow vs. Time**

**$Q_p = 68,000$  cfs**

(Assumption: Emergency spillway breaches at overtopping.)

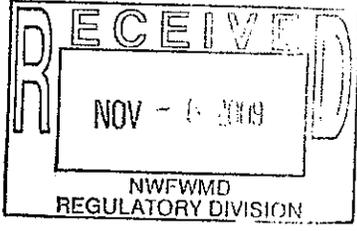
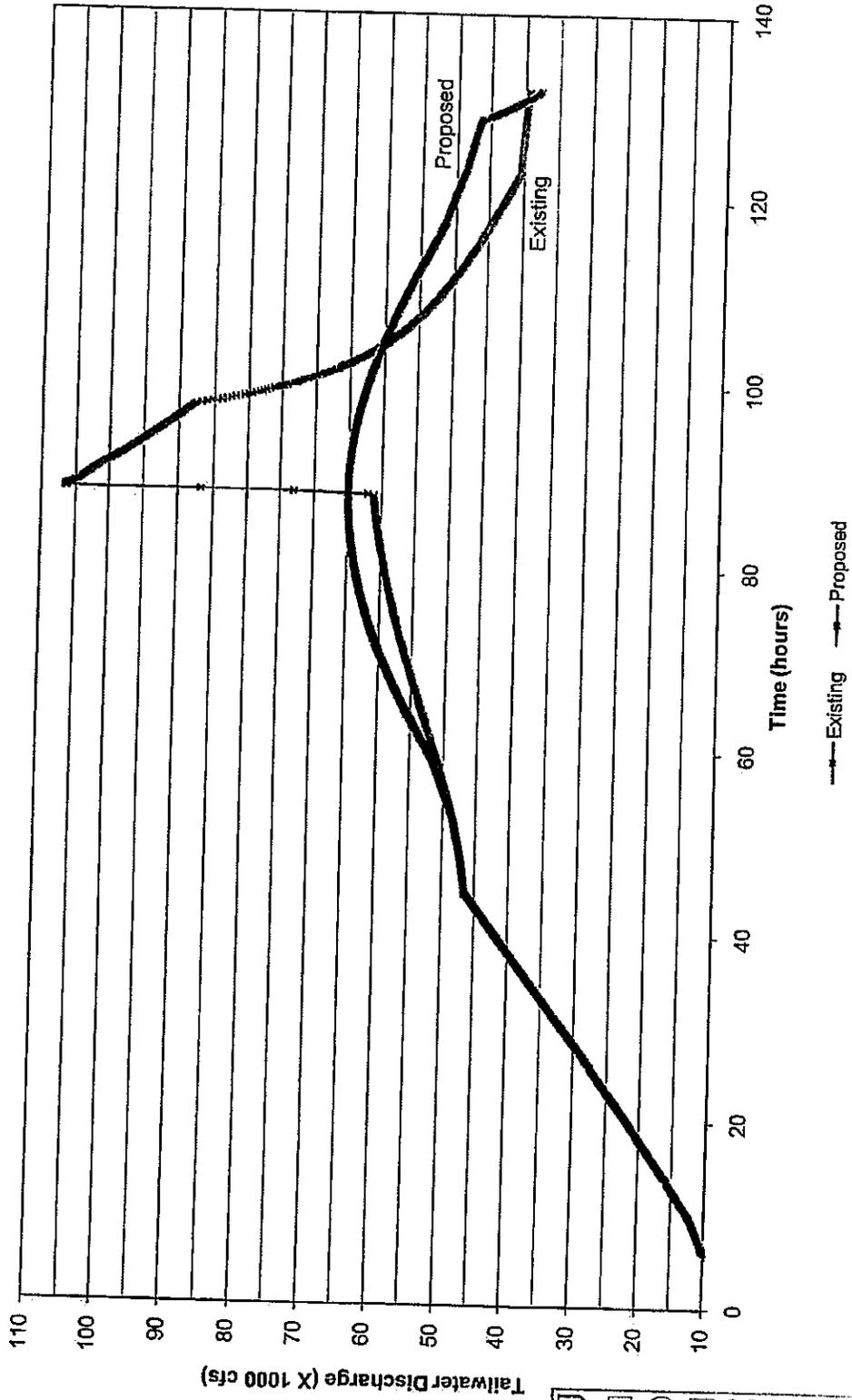


City of Tallahassee  
 C. H. Com Hydro Facility  
 Attachment 3 - Hydrographs for Inflow = 68,000 cfs  
 Emergency Spillway Breach

**Tailwater Discharge vs. Time**

**$Q_p = 68,000$  cfs**

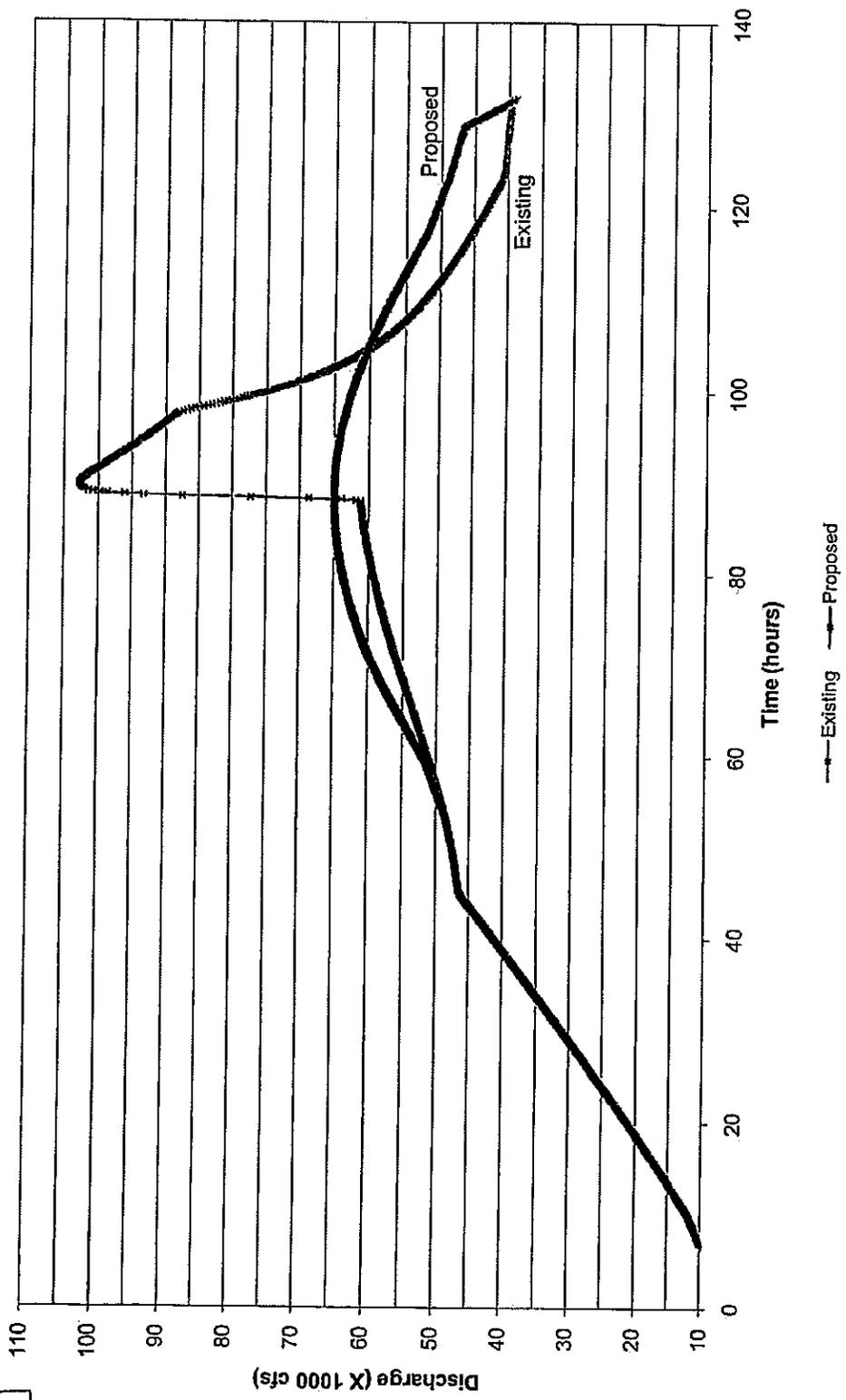
(Assumption: Emergency spillway breaches at overtopping.)



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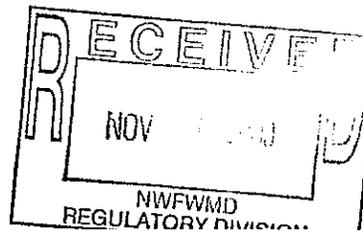
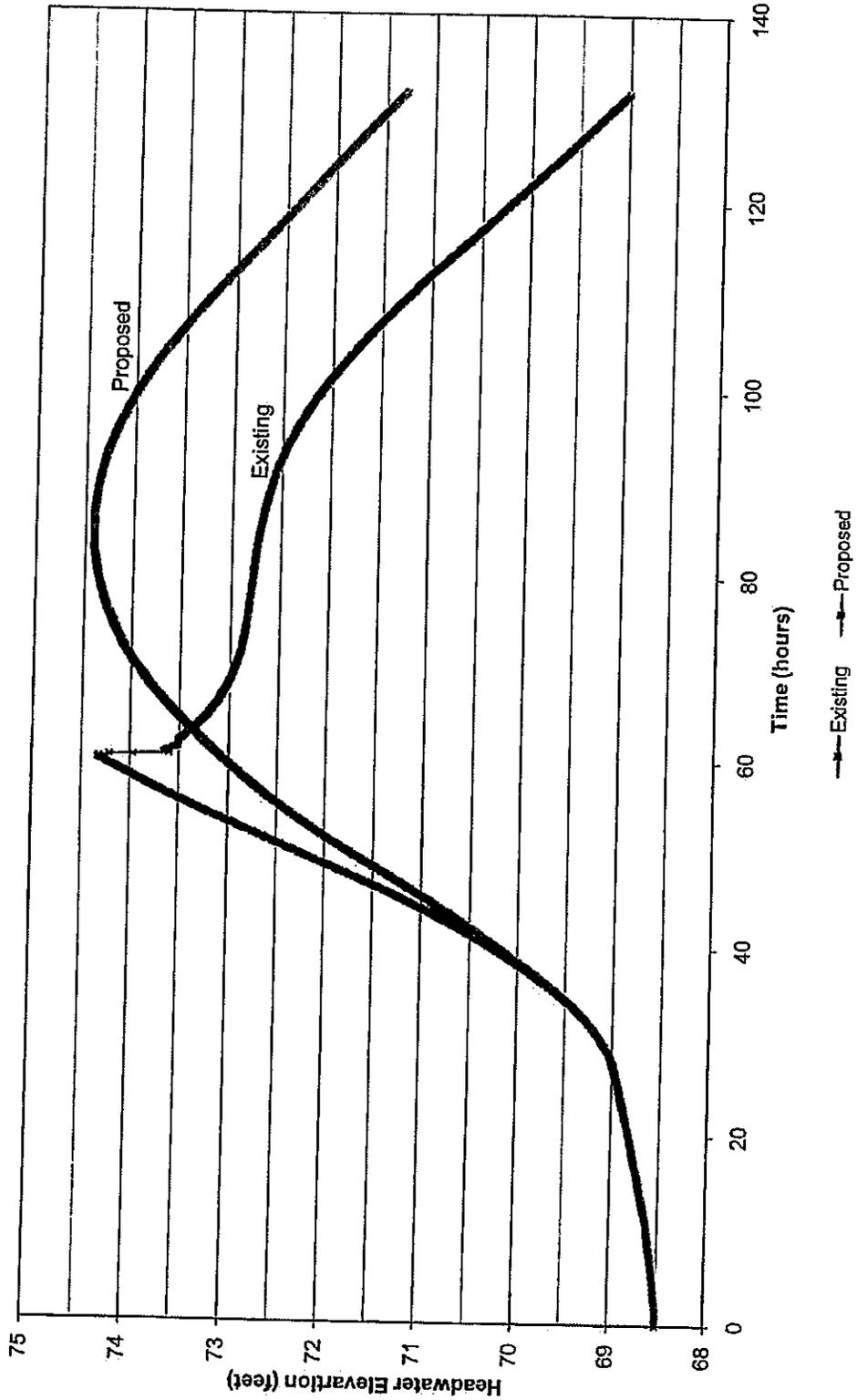
City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 3 - Hydrographs for Inflow = 68,000 cfs  
 Emergency Spillway Breach

Discharge vs. Time @ Crooked Rd.  
 $Q_p = 68,000$  cfs  
 (Assumption: Emergency spillway breaches at overtopping.)



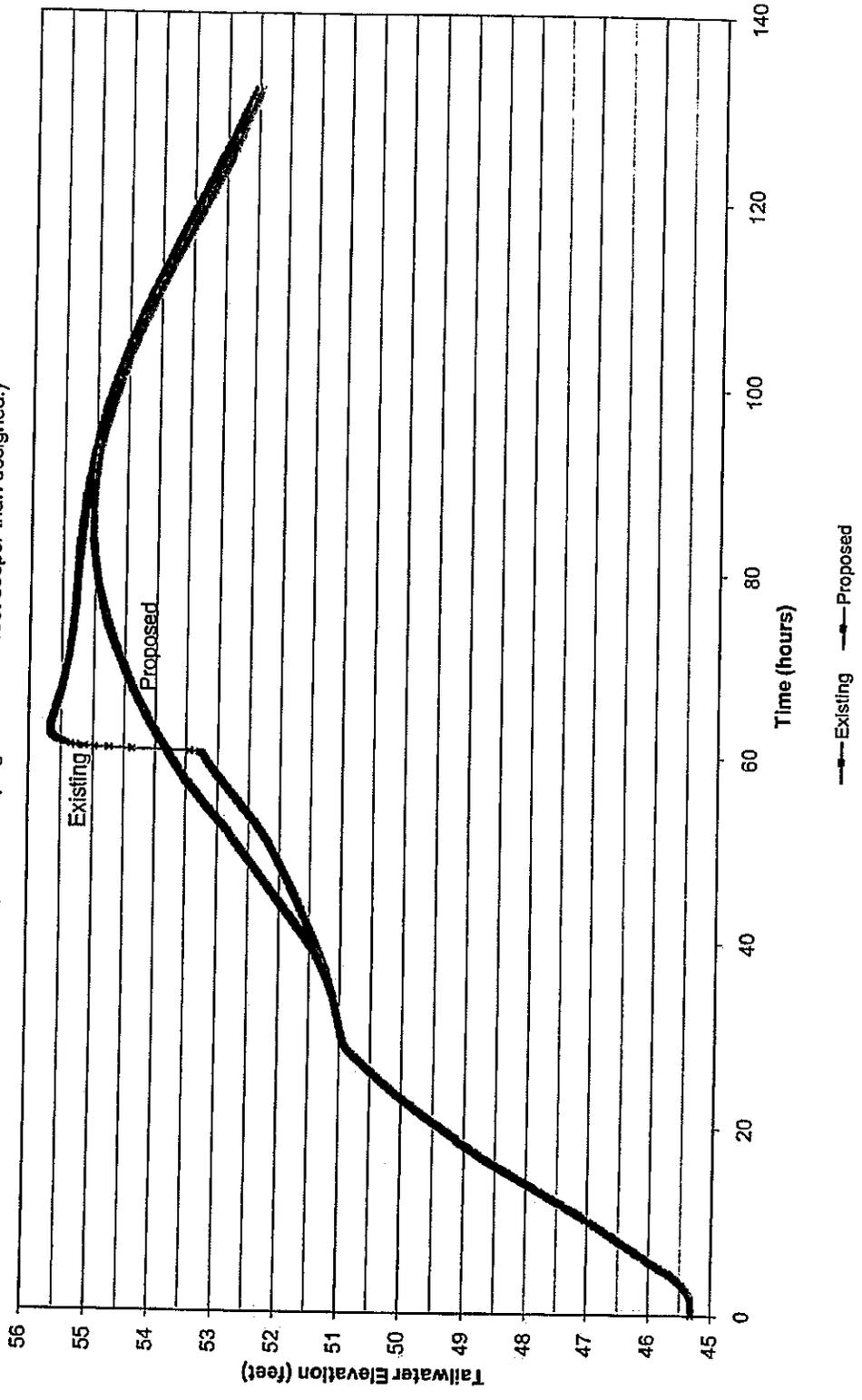
City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 4 - Hydrographs for 500-Year Flood Condition  
 Fuse Plug Breaches Deeper

**Headwater Elevation vs. Time**  
**500-Year Flood ( $Q_p = 109,000$  cfs)**  
 (Assumption: Fuse plug breaches 4 feet deeper than designed.)



City of Tallahassee  
 C. H. Com Hydro Facility  
 Attachment 4 - Hydrographs for 500-Year Flood Condition  
 Fuse Plug Breaches Deeper

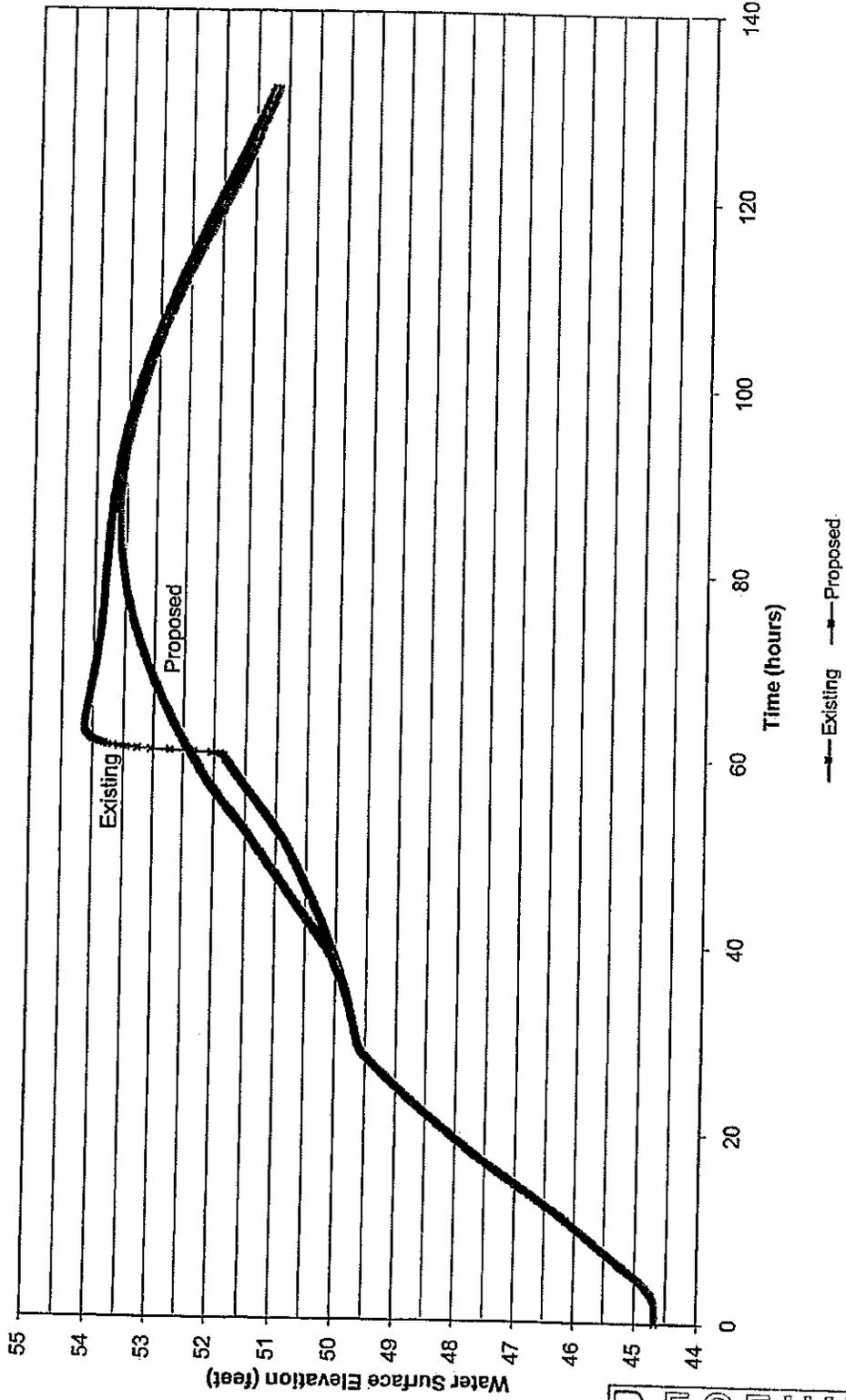
**Tailwater Elevation vs. Time**  
**500-Year Flood ( $Q_p = 109,000$  cfs)**  
 (Assumption: Fuse plug breaches 4 feet deeper than designed.)



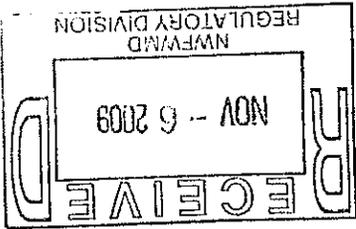
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City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 4 - Hydrographs for 500-Year Flood Condition  
 Fuse Plug Breaches Deeper

**Water Surface Elevation vs. Time @ Crooked Rd.**  
**500-Year Flood ( $Q_p = 109,000$  cfs)**  
 (Assumption: Fuse plug breaches 4 feet deeper than designed.)

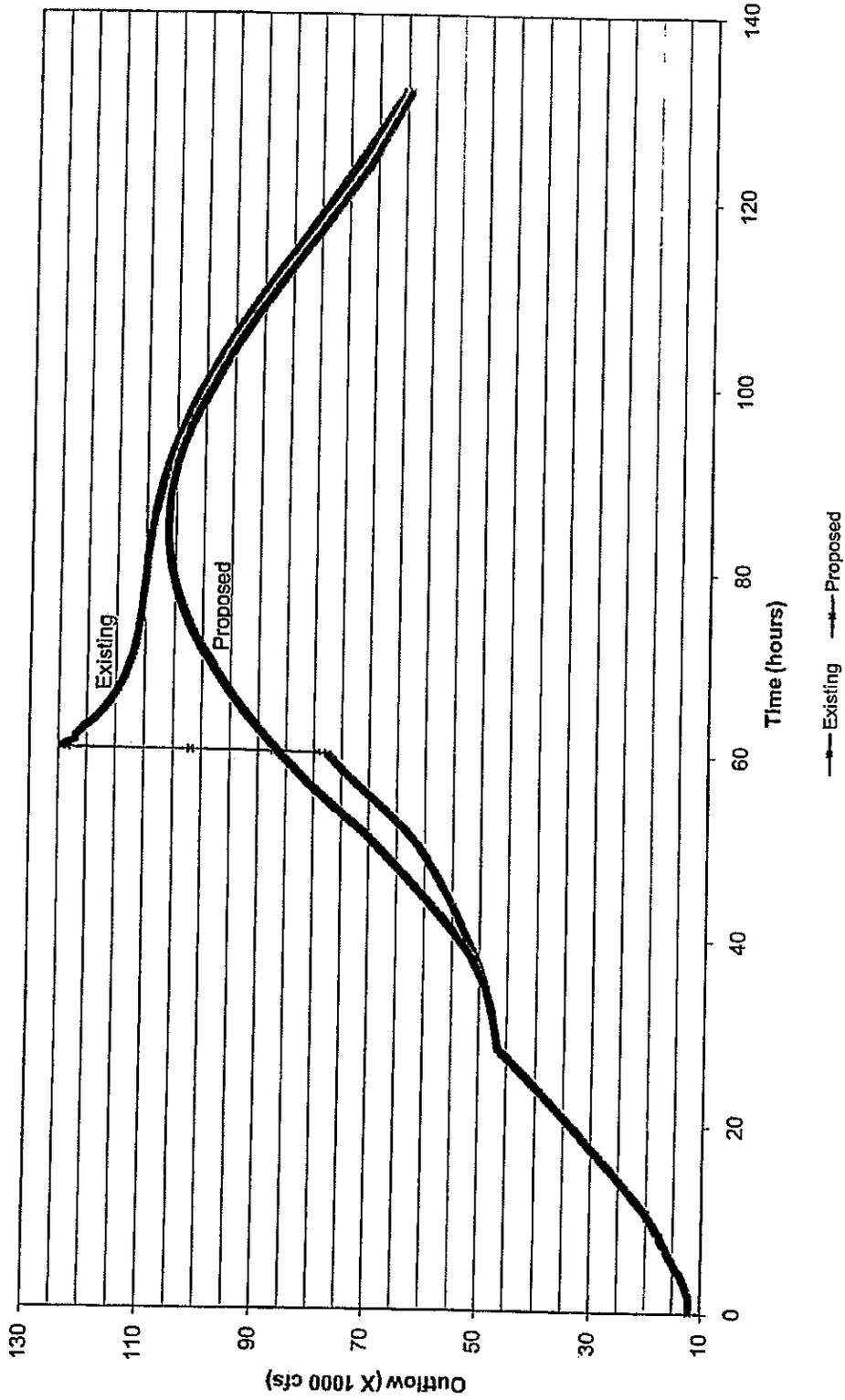


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City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 4 - Hydrographs for 500-Year Flood Condition  
Fuse Plug Breaches Deeper

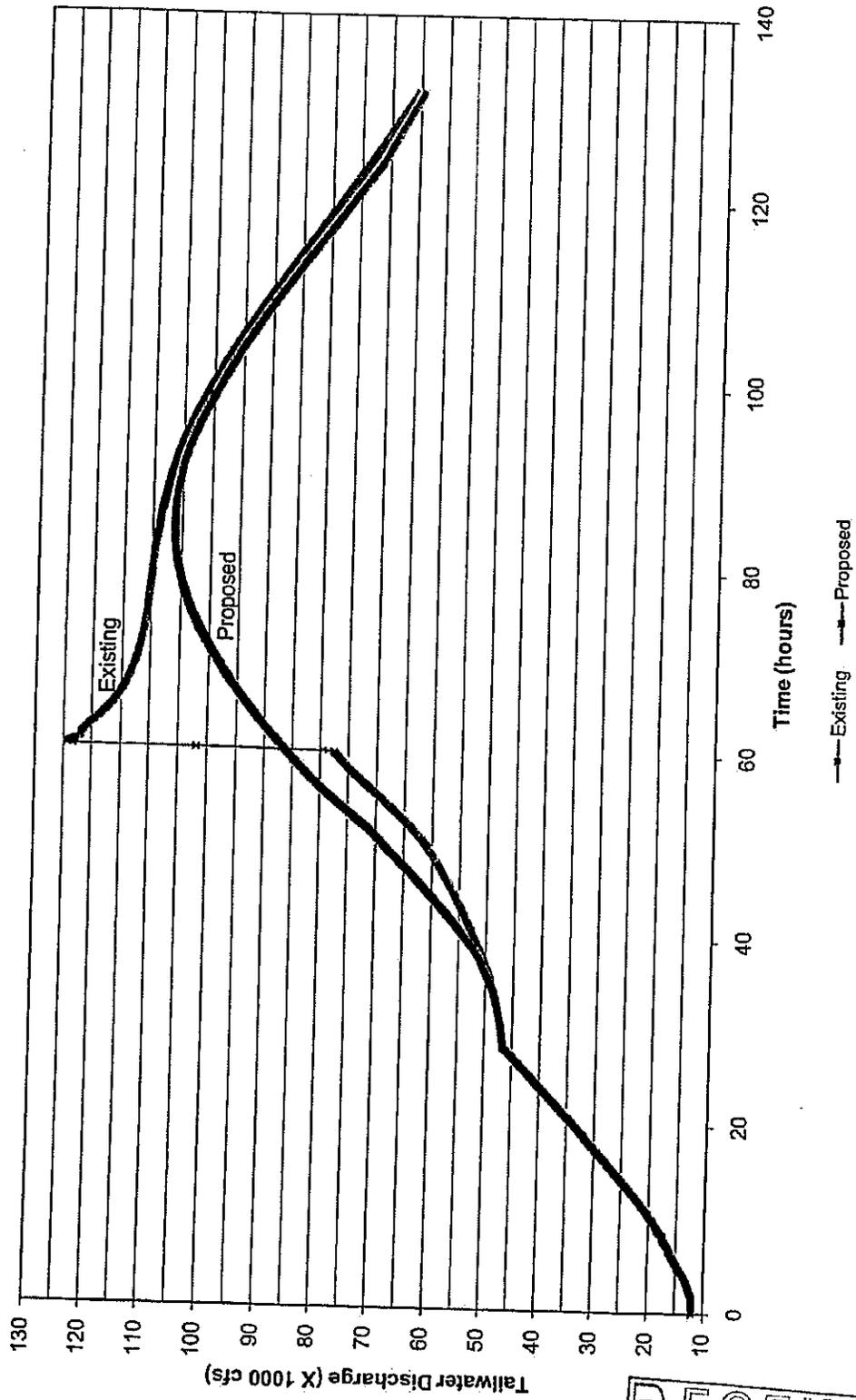
**Dam Outflow vs. Time**  
**500-Year Flood ( $Q_p = 109,000$  cfs)**  
(Assumption: Fuse plug breaches 4 feet deeper than designed.)



X:\20147-00\09004\TECH\Information for FDEP RAINhydrographs\_Q500\_Fuse plug deep breach.xls

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 4 - Hydrographs for 500-Year Flood Condition  
Fuse Plug Breaches Deeper

**Tailwater Discharge vs. Time**  
**500-Year Flood ( $Q_p = 109,000$  cfs)**  
(Assumption: Fuse plug breaches 4 feet deeper than designed.)

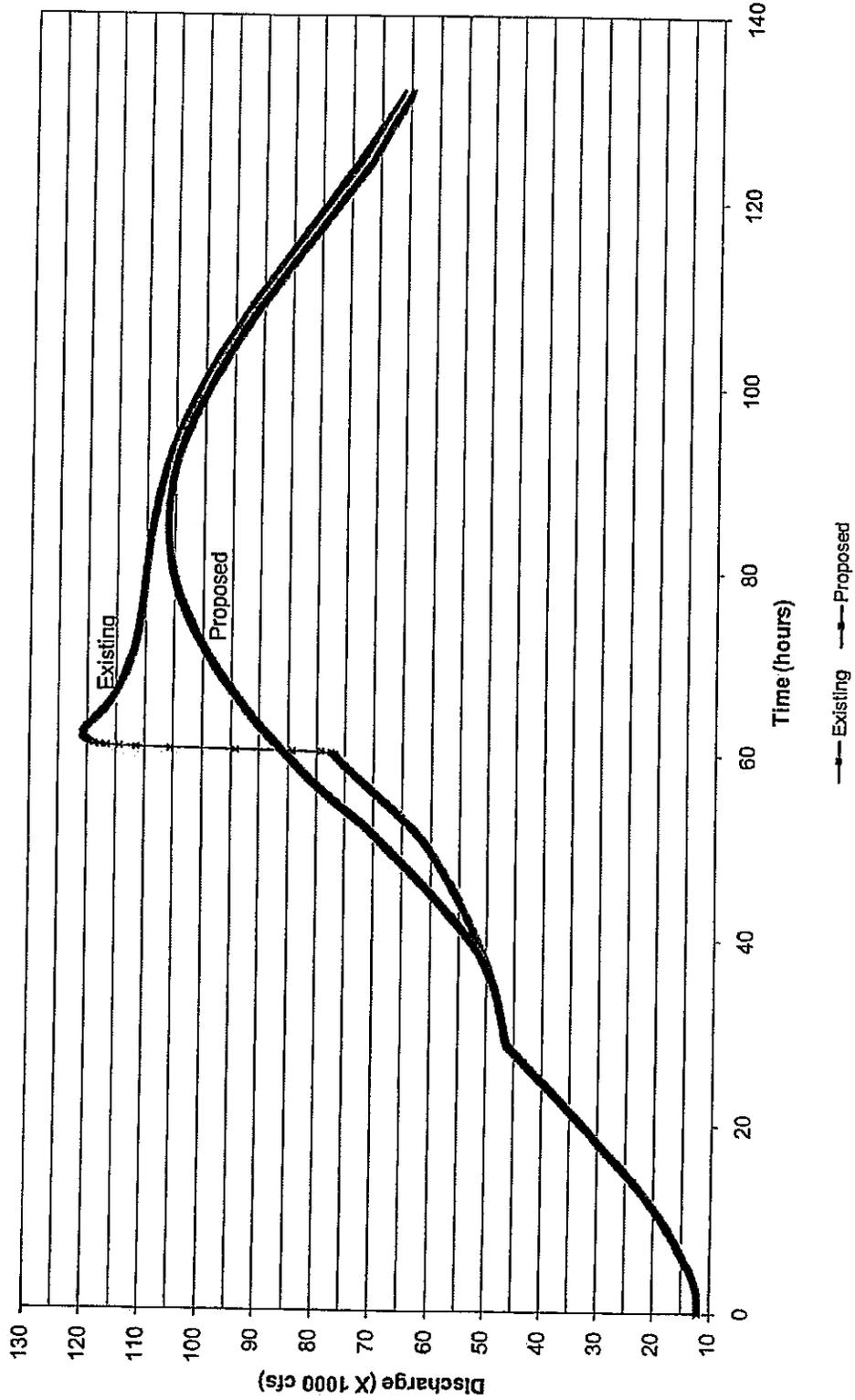


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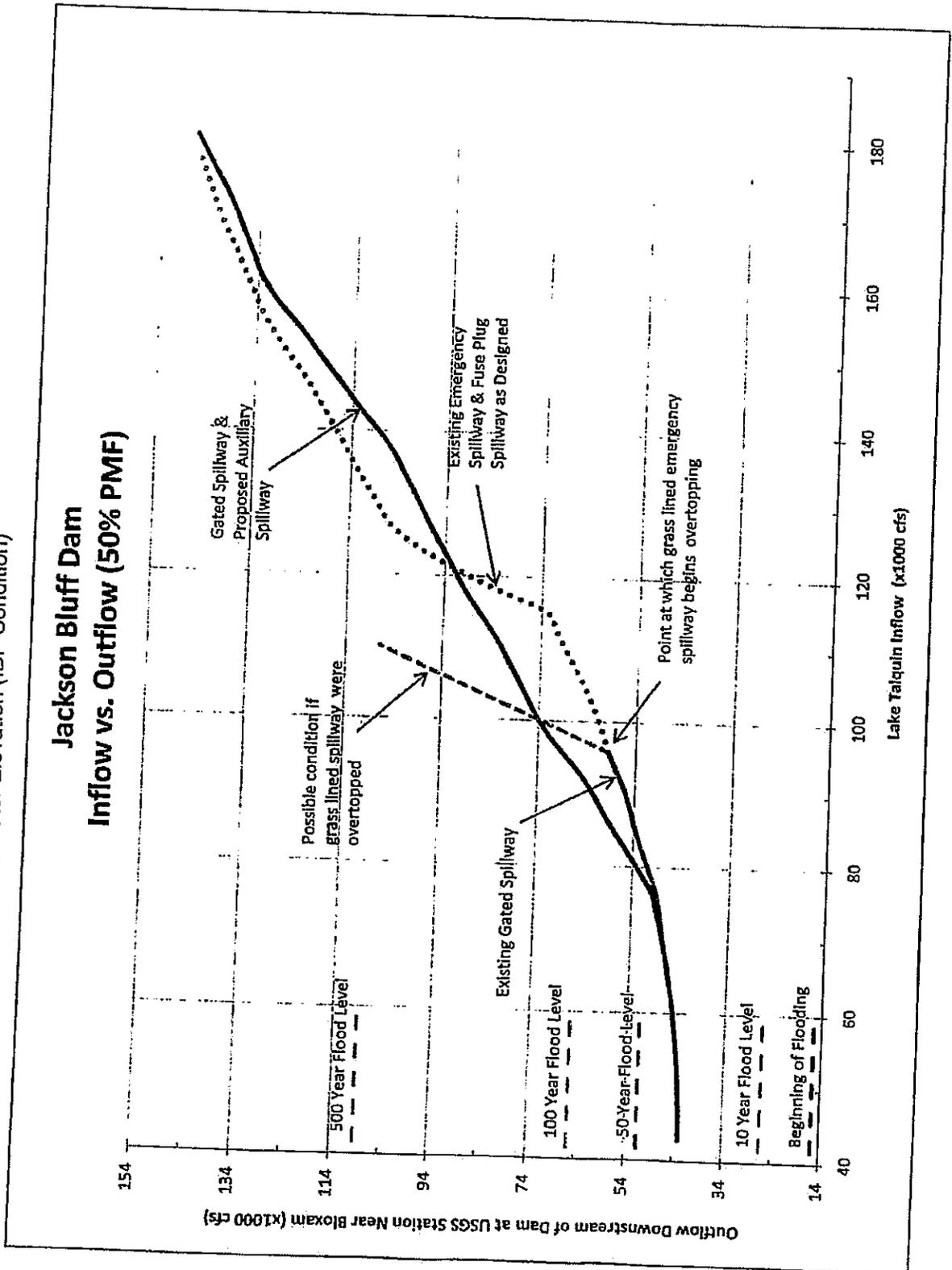
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 REGULATORY DIVISION

City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 4 - Hydrographs for 500-Year Flood Condition  
 Fuse Plug Breaches Deeper

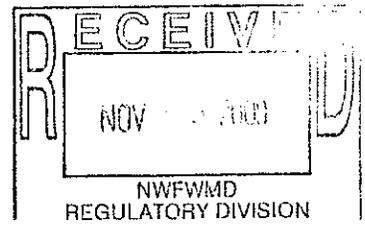
Discharge vs. Time @ Crooked Rd.  
 500-Year Flood ( $Q_p = 109,000$  cfs)  
 (Assumption: Fuse plug breaches 4 feet deeper than designed.)

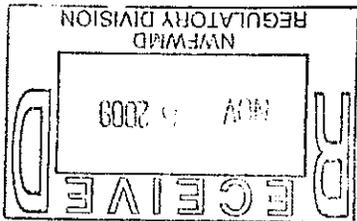


City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 5 - Inflow, Outflow, and Tailwater Elevation (IDF Condition)

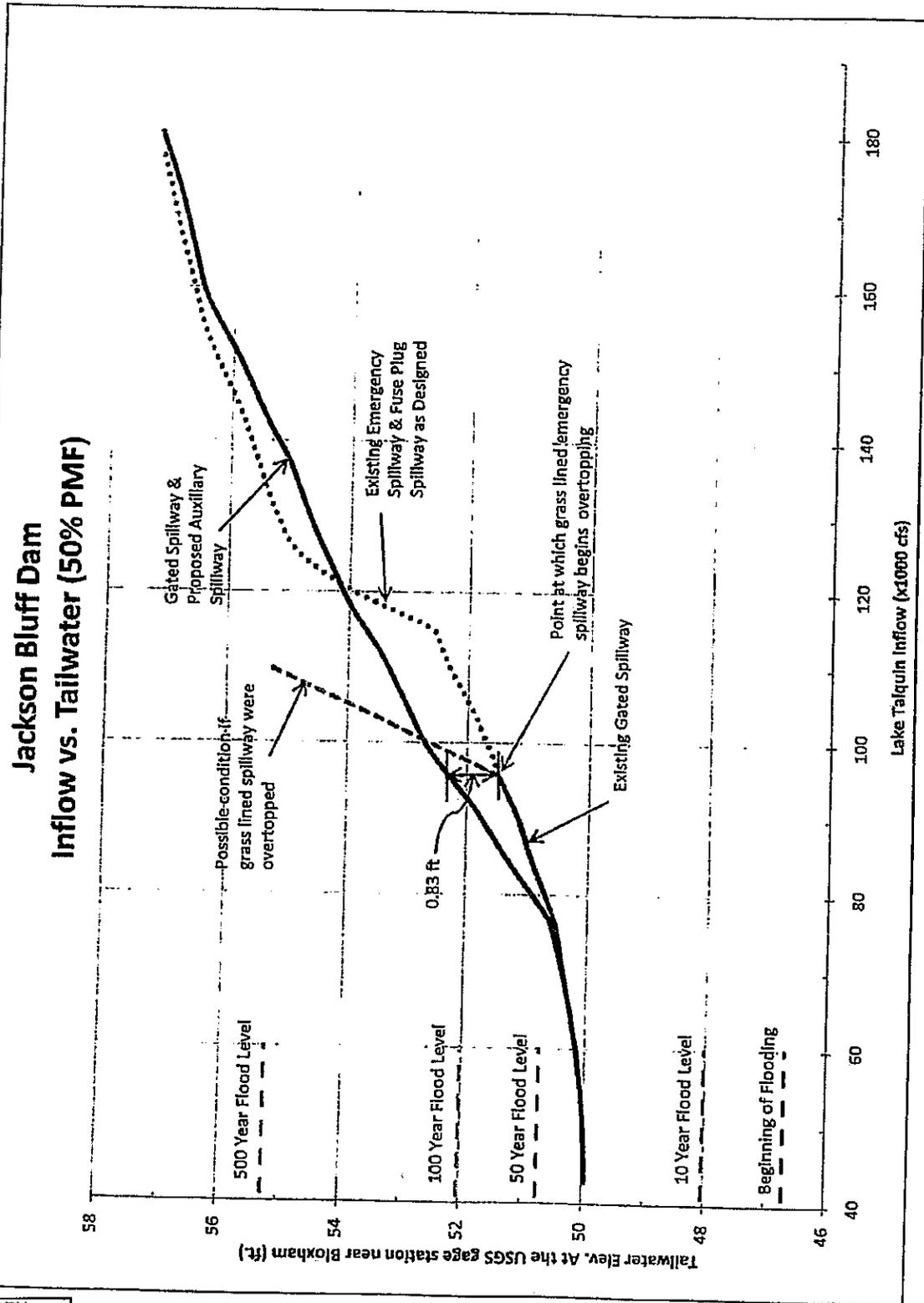


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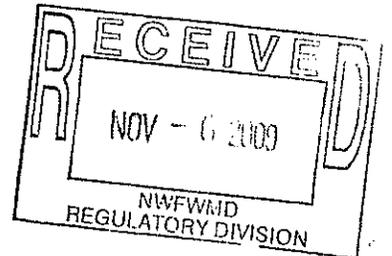
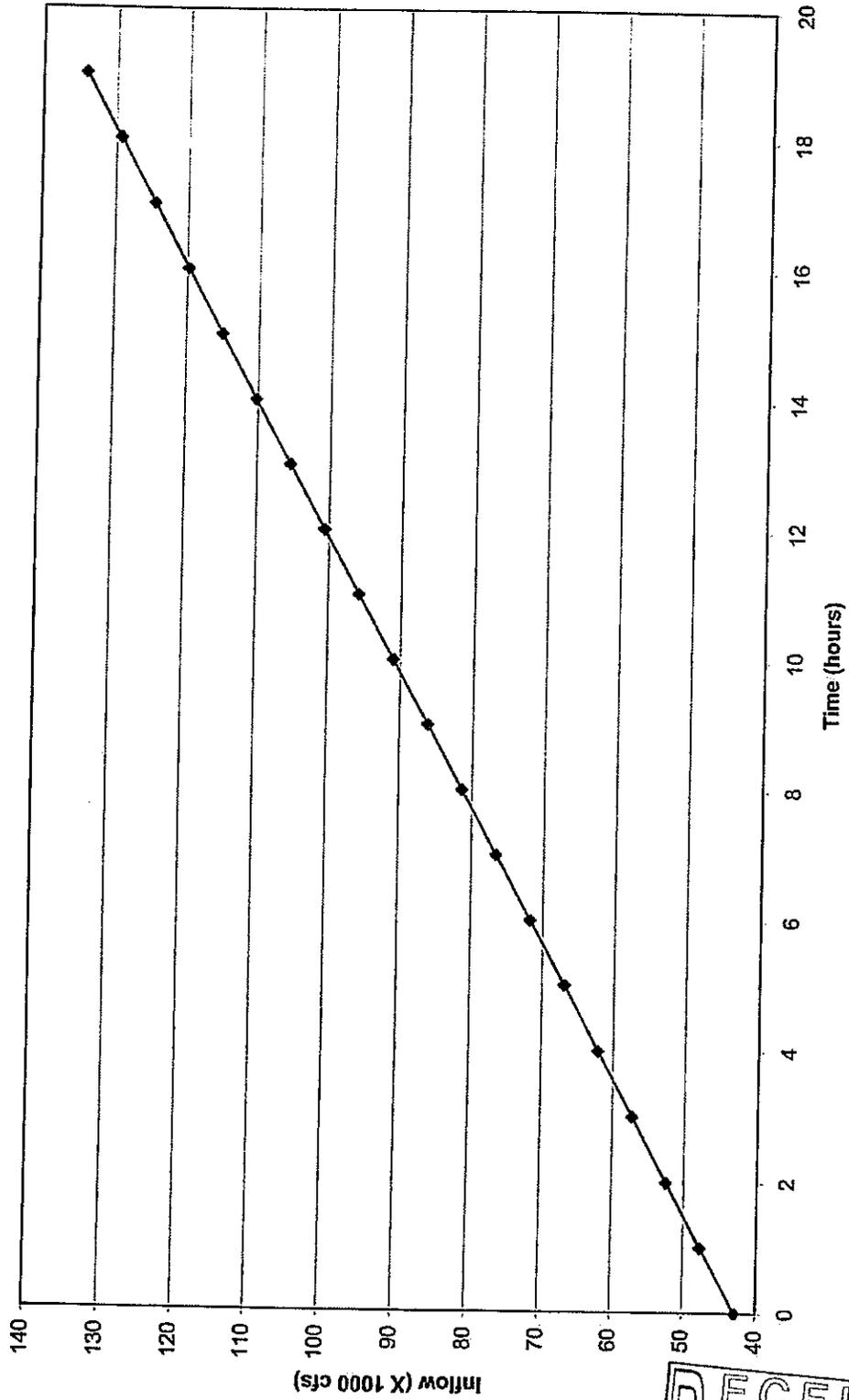


City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 5 - Inflow, Outflow, and Tailwater Elevation (IDF Condition)

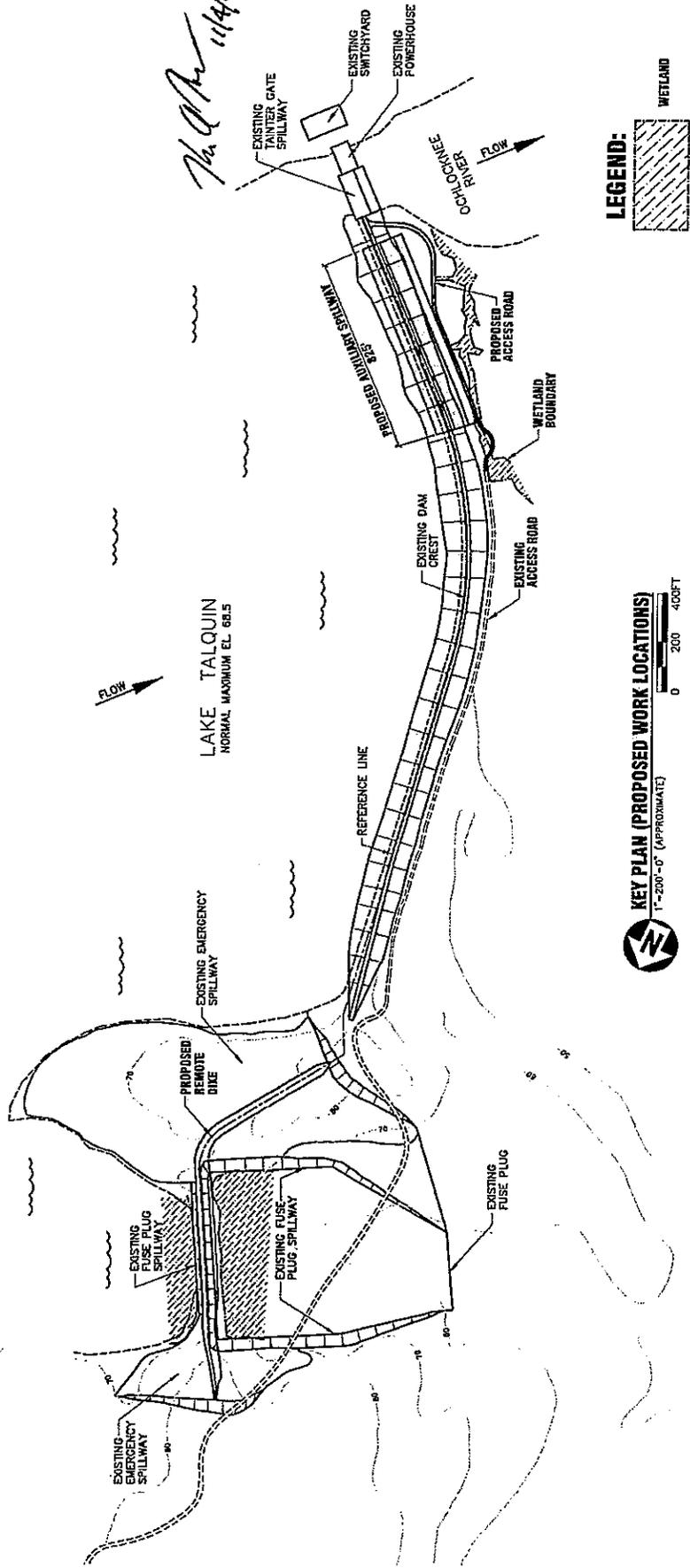


City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 5 - Inflow, Outflow, and Tailwater Elevation (IDF Condition)

Inflow Hydrograph  
IDF (50% PMF)



*M.A.H.* 11/4/89



**KEY PLAN (PROPOSED WORK LOCATIONS)**  
 1"=200'-0" (APPROXIMATE)

0 200 400 FT

**DRAWING REFERENCE:**  
 SEE SURVEY OF LEASE AREA DRAWING INCLUDED IN THIS DRAWING FOR A REFERENCE TO SHEET 45. THE DRAWING WAS PROVIDED TO ME BY HUNT BY THE CITY OF TALLAHASSEE PUBLIC WORKS DEPARTMENT AND IS DATED SEPTEMBER 17, 1982. WORK ORDER NO. 61-428, FILE NO. 81-035.

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REGISTRATION DIVISION

DATE	NO.	BY	REVISIONS

FIELD CHECK	
DRAWN BY	
CHECKED BY	
DATE	
SCALE	

<b>PROJECT TITLE</b>	JACKSON BLUFF HYDRO PROJECT
<b>PROJECT</b>	F.E.R.C. PROJECT No. 2891
<b>PROJECT</b>	AUXILIARY SPILLWAY
<b>FILE NO.</b>	81-035
<b>PROJECT NO.</b>	81-035

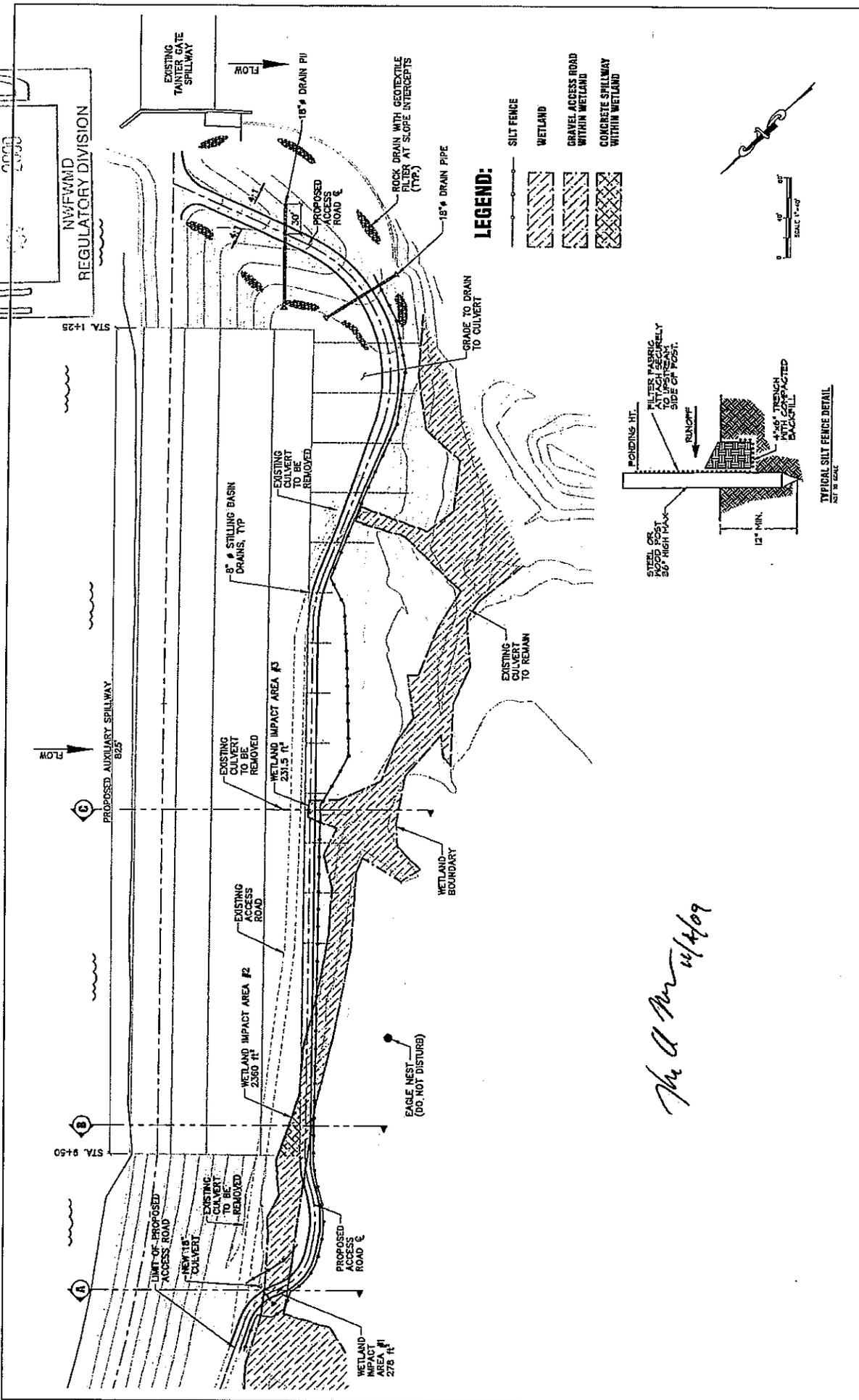
<b>SHEET TITLE</b>	JACKSON BLUFF DAM WETLAND
<b>OVERVIEW</b>	
<b>FILE NO.</b>	81-035
<b>PROJECT NO.</b>	81-035

<b>SHEET</b>	1
<b>DF</b>	6



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*John A. ...*

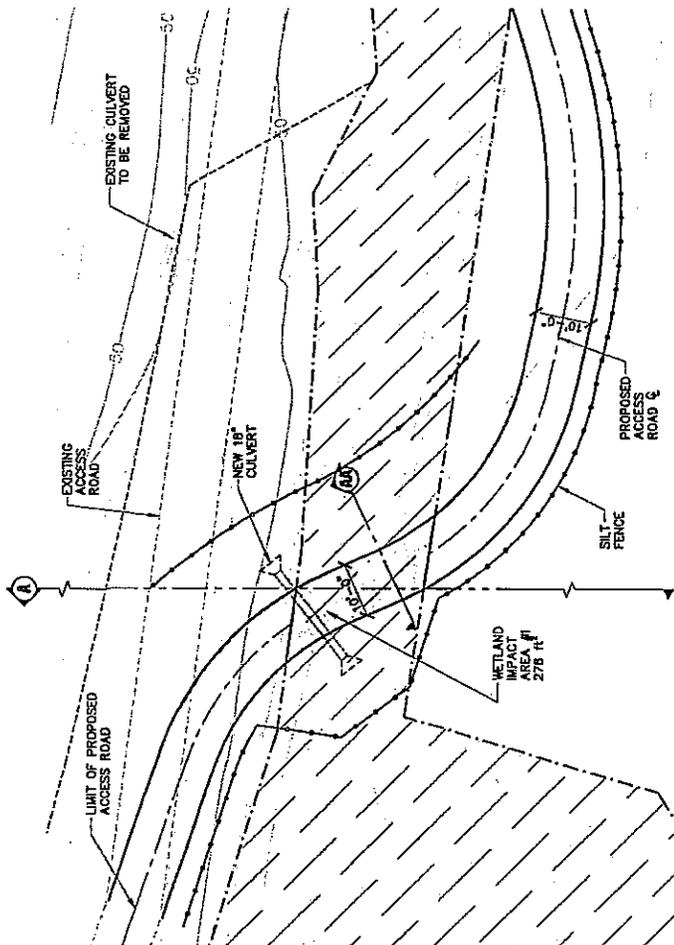
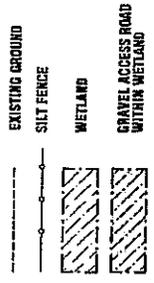
FIELD NO.	DWG.	DATE	BY	CHK.	DATE	BY	DATE	BY
PROJECT: JACKSON BLUFF HYDRO PROJECT F.E.R.C. PROJECT NO. 2891 AUXILIARY SPILLWAY								
SHEET TITLE: JACKSON BLUFF DAM WETLAND PROPOSED ACCESS ROAD/SPILLWAY								
SHEET 3 OF 6								
FILE PATH: S:\2007-2008\PROJECTS\2891\2891\DWG\2891\2891_3.DWG FILE NO.: 2891_3 PLOT NO.: 2891_3								

# BLUVEW D

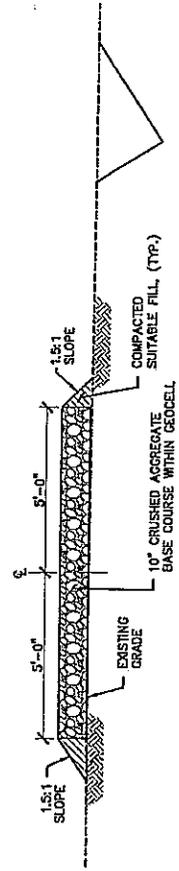
## WETLAND IMPACT AREA #1

CUT AREA = 278.0 FT<sup>2</sup>  
 FILL AREA = 278.0 FT<sup>2</sup>  
 CUT VOLUME AREA (SOIL) = 8.5 YD<sup>3</sup>  
 FILL VOLUME (GRAVEL) = 8.5 YD<sup>3</sup>  
 FILL VOLUME (CONCRETE) = 0.0 YD<sup>3</sup>

### LEGEND:



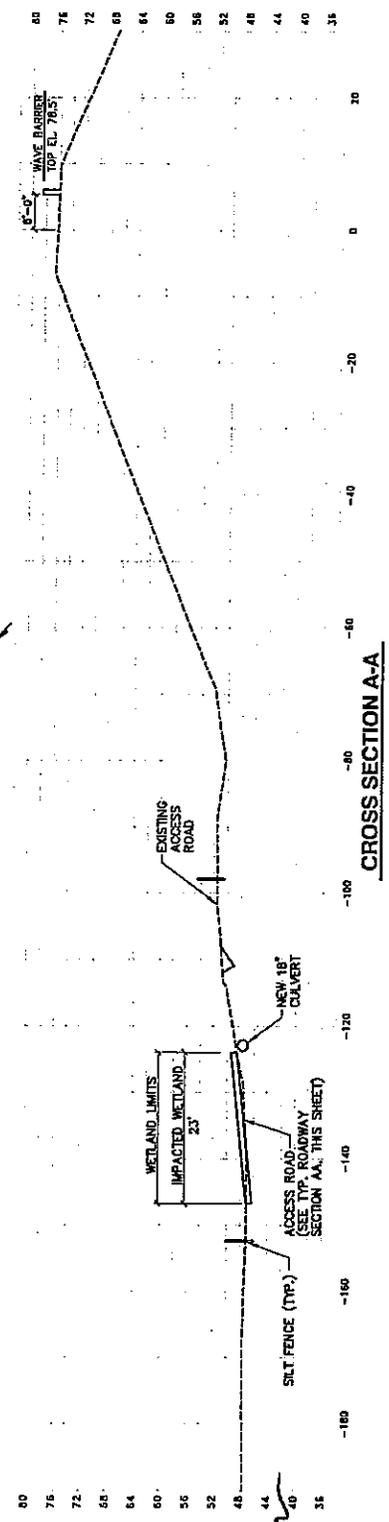
### PLAN AT WETLAND IMPACT AREA #1



### CROSS SECTION AA-AA ROADWAY SECTION THROUGH WETLAND AREA #1

NOT TO SCALE

NOTE:  
 INSTALL GEOCELL PRODUCT FOR EROSION CONTROL PURPOSES AT WETLAND IMPACT AREAS WHERE THE ACCESS ROAD CROSSES THE WETLAND.



### CROSS SECTION A-A

FIELD NO.	DATE	BY	REVISIONS

**City of Tallahassee**  
 Your Own Utilities®

**MEAD & MOUNT**  
 453 West Oak, Tallahassee, Florida 32308  
 TEL: 904-224-4400 FAX: 904-224-4401  
 WWW.MEADANDMOUNT.COM

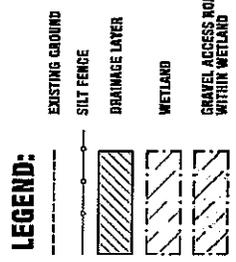
**PROJECT:**  
 JACKSON BLUFF HYDRO PROJECT  
 F.E.R.C. PROJECT NO. 2891  
 AUXILIARY SPILLWAY

**SHEET TITLE:**  
 JACKSON BLUFF DAM WETLAND  
 WETLAND IMPACT AREA #1  
**SHEET:** 4  
**OF:** 6

*Tom A. [Signature]*  
 11/4/09

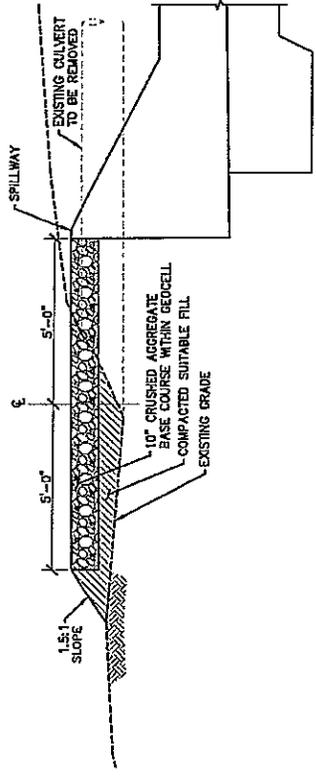
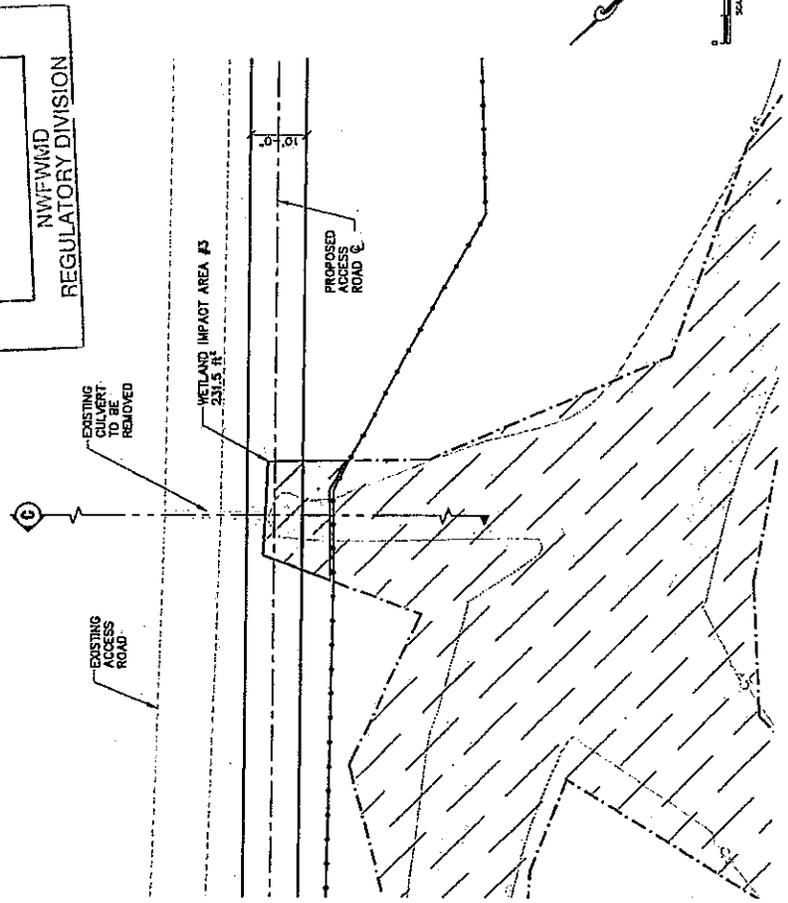


**PROPOSED**  
NOV 2009  
NWFWMRD  
REGULATORY DIVISION



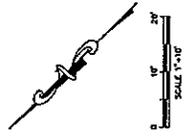
**WETLAND IMPACT AT AREA #3**

CUT AREA = 231.5 FT<sup>2</sup>  
 FILL AREA = 231.5 FT<sup>2</sup>  
 CUT VOLUME AREA (SOIL) = 7.8 YD<sup>3</sup>  
 FILL VOLUME (GRAVEL) = 7.8 YD<sup>3</sup>  
 FILL VOLUME (CONCRETE) = 0.0 YD<sup>3</sup>

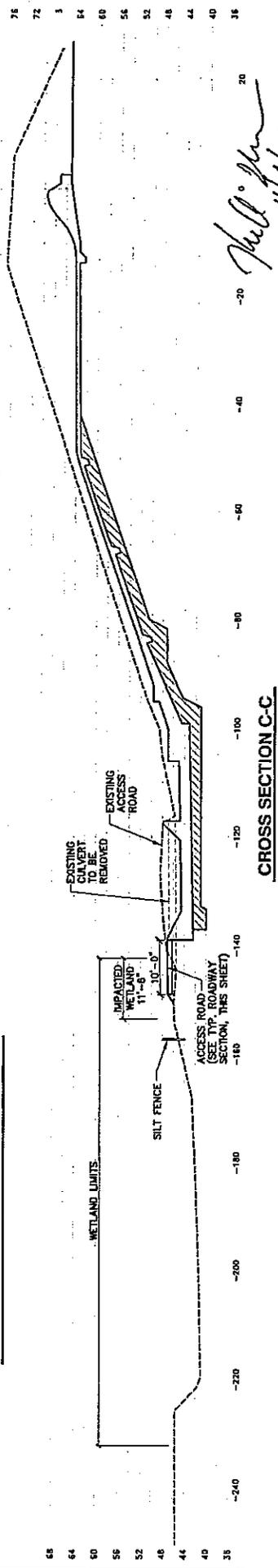


**ROADWAY SECTION THROUGH WETLAND AREA #3**  
NOT TO SCALE

NOTE:  
 INSTALL GEOCELL PRODUCT FOR EROSION CONTROL PURPOSES AT WETLAND IMPACT AREAS WHERE THE ACCESS ROAD CROSSES THE WETLAND.



**PLAN AT WETLAND IMPACT AREA #3**



*John J. ... 11/4/09*

DATE	BY	REVISIONS

FIELD NO.	
DRAWN BY	
CHECKED BY	
SCALE	

DATE		BY		REVISIONS

DATE		BY		REVISIONS

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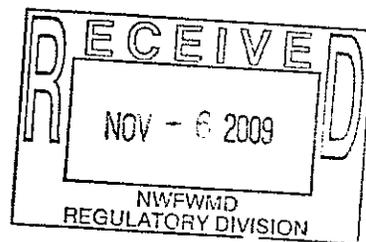
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November 4, 2009

Mr. Robert McGarrah  
City of Tallahassee  
2602 Jackson Bluff Road  
Tallahassee, FL 32304

Subject: Jackson Bluff Hydroelectric Spillway Modification  
Application 20-0296182-001-DF  
Request for Additional Information

Dear Mr. McGarrah:

The Florida Department of Environmental Protection (DEP) issued a letter to the City of Tallahassee (The City) on October 15, 2009, Requesting Additional Information (RAI) regarding the Wetland Resource Permit for the spillway modification project. The DEP letter contained three comments. This letter is Mead & Hunt, Inc.'s (Mead & Hunt) response to Items Nos. 2 and 3 of the DEP letter. The City will address Item No. 1 of the RAI.

**Item No. 2 Wetland Drawings:**

As requested, we have enclosed four copies of 8½" by 11" sealed, dimensioned drawings showing the existing and proposed conditions of the wetland impact areas. Topographic features of existing and proposed water crossings are shown on the drawings, as requested.

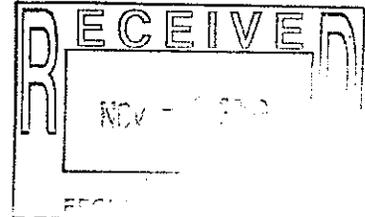
**Item No. 3 Downstream Studies:**

The purpose of this project is to design an auxiliary spillway at the Jackson Bluff Hydroelectric Project that would replace the fuse plug spillway and emergency spillway. The proposed auxiliary spillway would have a crest elevation at 69.5 feet and would pass a flow of 69,900 cubic feet per second (cfs) when the reservoir level is at its maximum stage of 77.0 feet (top of the dam).<sup>[1]</sup> A remote dike across the existing fuse plug and emergency spillway areas is also included in the proposed construction project. The remote dike will effectively prevent these existing spillways from functioning.

A series of BOSS DAMBRK computer models were developed and incorporated into a study report by Mead & Hunt in 2005 to determine the Inflow Design Flood (IDF) for the Jackson Bluff Hydroelectric Project. These models and the IDF study report were approved by the Federal Energy Regulatory Commission (FERC) in 2005.

<sup>[1]</sup> All elevations in this report are given in feet and referenced to the National Geodetic Vertical Datum of 1929 (NGVD 1929).

Mr. Robert McGarrah  
November 4, 2009  
Page 2



More recently, the DAMBRK models were used as a basis to simulate downstream flooding impacts from the existing and proposed spillways under five different flood conditions: the 50-year flood, the 100-year flood, an inflow equal to 68,000 cubic feet per second (cfs), the 500-year flood, and the IDF of 154,500 cfs. The inflow of 68,000 cfs is the flood event that would just overtop the emergency spillway under the existing design of the project. The graphical output of these models is attached.

Under the 50-year flood, the lake level would be below the elevation of 69.5 feet, therefore, the proposed auxiliary spillway would not be activated and there would be no changes to project discharges or downstream water levels.

Under the 100-year flood, the new auxiliary spillway would be activated with a maximum overtopping of approximately 1.7 feet of water. Under the existing conditions, the resulting headwater elevation of 71.1 feet would not activate the emergency spillway. As a result, the maximum tailwater level at the project with the new spillway design would be approximately 0.22 feet higher than that with the existing design.

Under the flood of 68,000 cfs, the existing emergency spillway would be just overtopped. The model run for the existing design assumed that the emergency spillway would fail at overtopping. The breach bottom elevation was assumed to be at elevation 46 feet, which was similar to that for the 1957 dam failure event and was approximately 10 feet above the foundation elevation. The average breach width was assumed to be 131 feet, which was approximately five times the breach depth (22.3 feet). The formation time of the breach was assumed to be 0.5 hours. These breach assumptions are not as conservative as those required by FERC's guidelines (FERC's guidelines require a breach bottom at the foundation of the structure). The predicted failure of the emergency spillway would result in a sudden tailwater rise of over 2 feet above the proposed auxiliary spillway design discharge.

Under the 500-year flood, the fuse plug would be overtopped and activated. The fuse plug was designed to fail down to elevation 68.5 feet, but is anticipated to fail much deeper due to the erodability of the foundation soils. The model run for the existing design assumed that the fuse plug failed 4 feet deeper than designed. Fuse plug designs with similar foundation conditions have failed considerably deeper than this assumption, which would result in a much larger uncontrolled release. If the fuse plug would fail 4 feet deeper than designed, it would result in a sudden tailwater rise greater than 2 feet.

For the 500-year flood, it is likely that the existing emergency spillway will fail without activating the fuse plug spillway. This results in a sudden rise in tailwater in excess of 2.5 feet. This assumption is shown on the attached plots.

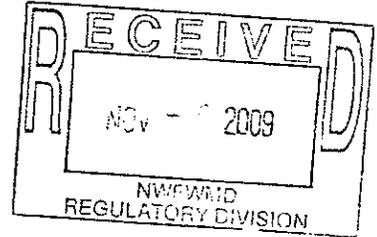
Under the IDF condition, both the emergency spillway and the fuse plug would be overtopped, therefore, both of these two spillways would be subject to failure. The model runs include the existing spillways functioning as designed, existing conditions with failure of the emergency spillway and activation of the fuse plug as designed, and the proposed auxiliary spillway. When the emergency spillway fails, there would be a sudden rise in tailwater in excess of 2.5 feet. The headwater would continue to rise after the failure of the emergency spillway and eventually overtop and activate the fuse plug. At this time, there

Mr. Robert McGarrah  
November 4, 2009  
Page 3

would be another sudden rise in tailwater greater than 1 foot. With both spillways failure, the maximum tailwater level with the existing design would be slightly higher than that with the new spillway design.

The list of attachments included with this letter:

- Attachment 1 Spillway Rating Curves
- Attachment 2 Comparison of Water Stage, Flow Rate, and Flow Velocities
- Attachment 3 Inflow vs. Outflow and Water Surface Elevations
- Attachment 4 Hydrographs for 50-Year Flood
- Attachment 5 Hydrographs for 100-Year Flood
- Attachment 6 Hydrographs for 68,000 cfs Flood
- Attachment 7 Hydrographs for 500-Year Flood
- Attachment 8 Hydrographs for IDF



Please feel free to contact us if you have any questions regarding this letter or any of the attachments.

Sincerely,

MEAD & HUNT, Inc.

A handwritten signature in black ink, appearing to read "Yiyong Xiong".

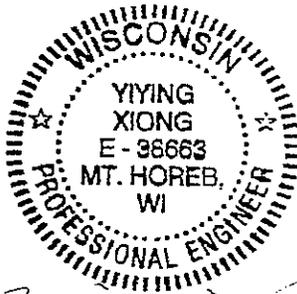
Yiyong Xiong, PE  
Attachments

MEAD & HUNT, Inc.

A handwritten signature in black ink, appearing to read "Kim A. Hansen".

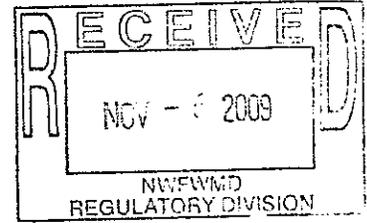
Kim A. Hansen, PE

Cc: Mr. Karl Bauer



A handwritten signature in black ink, appearing to read "Yiyong Xiong", with the date "11/4/09" written below it.

A handwritten signature in black ink, appearing to read "Kim A. Hansen", with the date "11/4/09" written below it.



## List of Attachments

### Attachment 1 - Spillway Rating Curves

### Attachment 2 - Comparison of Water Stage, Flow Rate, and Flow Velocities

- 50-yr
- 100-yr
- 500-yr
- IDF
- 500-yr assuming fuse plug breaches 4 ft deeper
- 500-yr assuming emergency spillway breaches
- 68,000 cfs assuming emergency spillway breaches
- IDF assuming both emergency spillway and fuse plug breach

### Attachment 3 - Inflow vs. Outflow & WSEL plots

- Inflow vs. Headwater El.
- Inflow vs. Tailwater El.
- Inflow vs. WSEL at Crooked Road
- Inflow vs. Outflow

### Attachment 4 - Hydrographs for 50-yr flood

- Headwater El. vs. Time
- Tailwater El. vs. Time
- WSEL vs. Time at Crooked Road
- Tailwater Discharge vs. Time
- Discharge at Crooked Road

### Attachment 5 - Hydrographs for 100-yr flood

- Headwater El. vs. Time
- Tailwater El. vs. Time
- WSEL vs. Time at Crooked Road
- Tailwater Discharge vs. Time
- Discharge at Crooked Road

### Attachment 6 - Hydrographs for 68,000 cfs

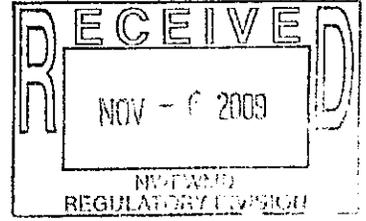
- Headwater El. vs. Time
- Tailwater El. vs. Time
- WSEL vs. Time at Crooked Road
- Tailwater Discharge vs. Time
- Discharge at Crooked Road

### Attachment 7 - Hydrographs for 500-yr flood

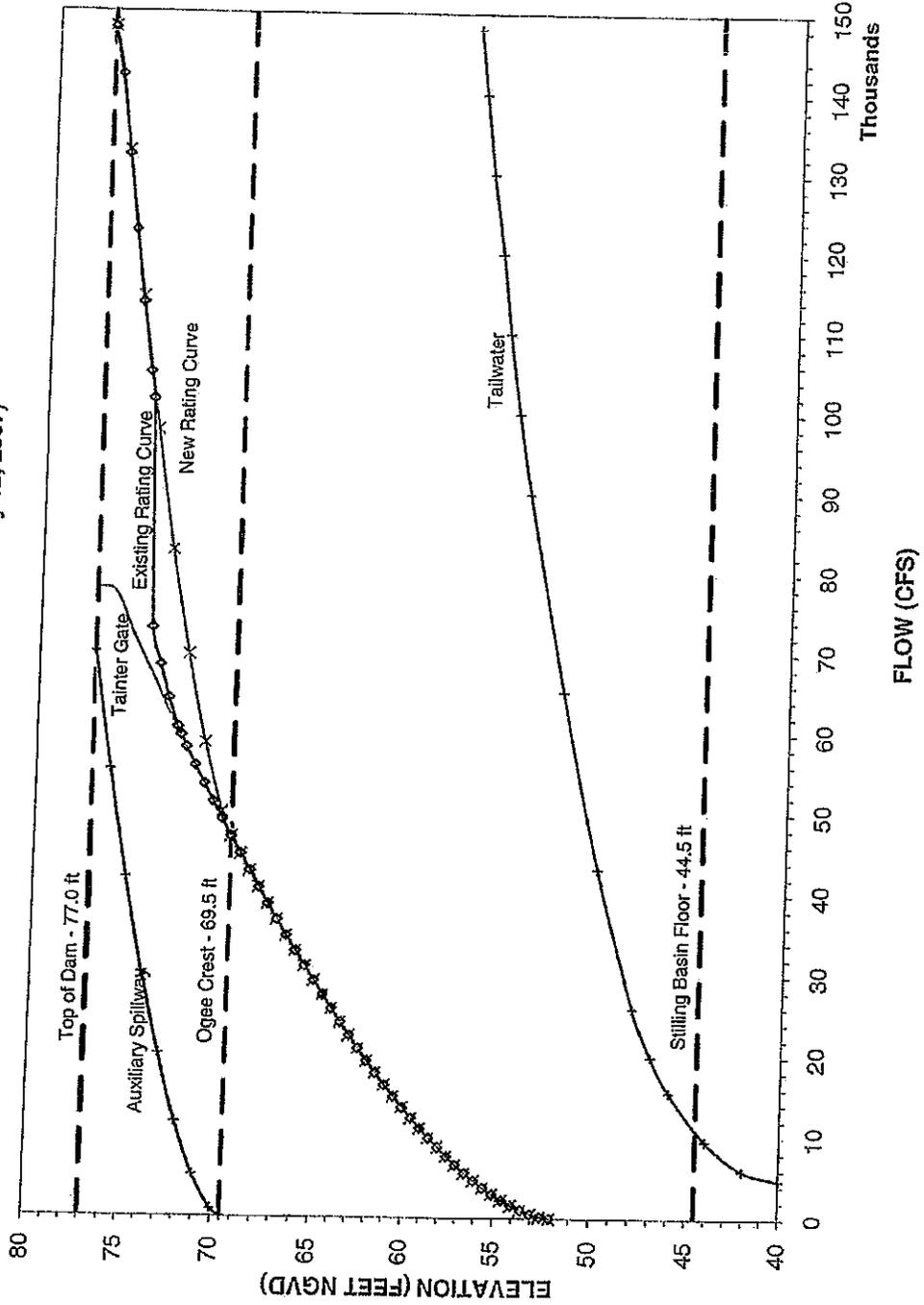
- Headwater El. vs. Time
- Tailwater El. vs. Time
- WSEL vs. Time at Crooked Road
- Tailwater Discharge vs. Time
- Discharge at Crooked Road

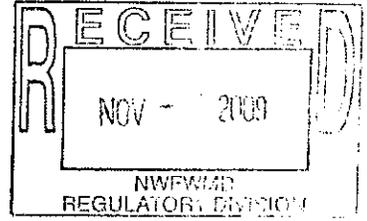
### Attachment 8 - Hydrographs for IDF

- Headwater El. vs. Time
- Tailwater El. vs. Time
- WSEL vs. Time at Crooked Road
- Tailwater Discharge vs. Time
- Discharge at Crooked Road

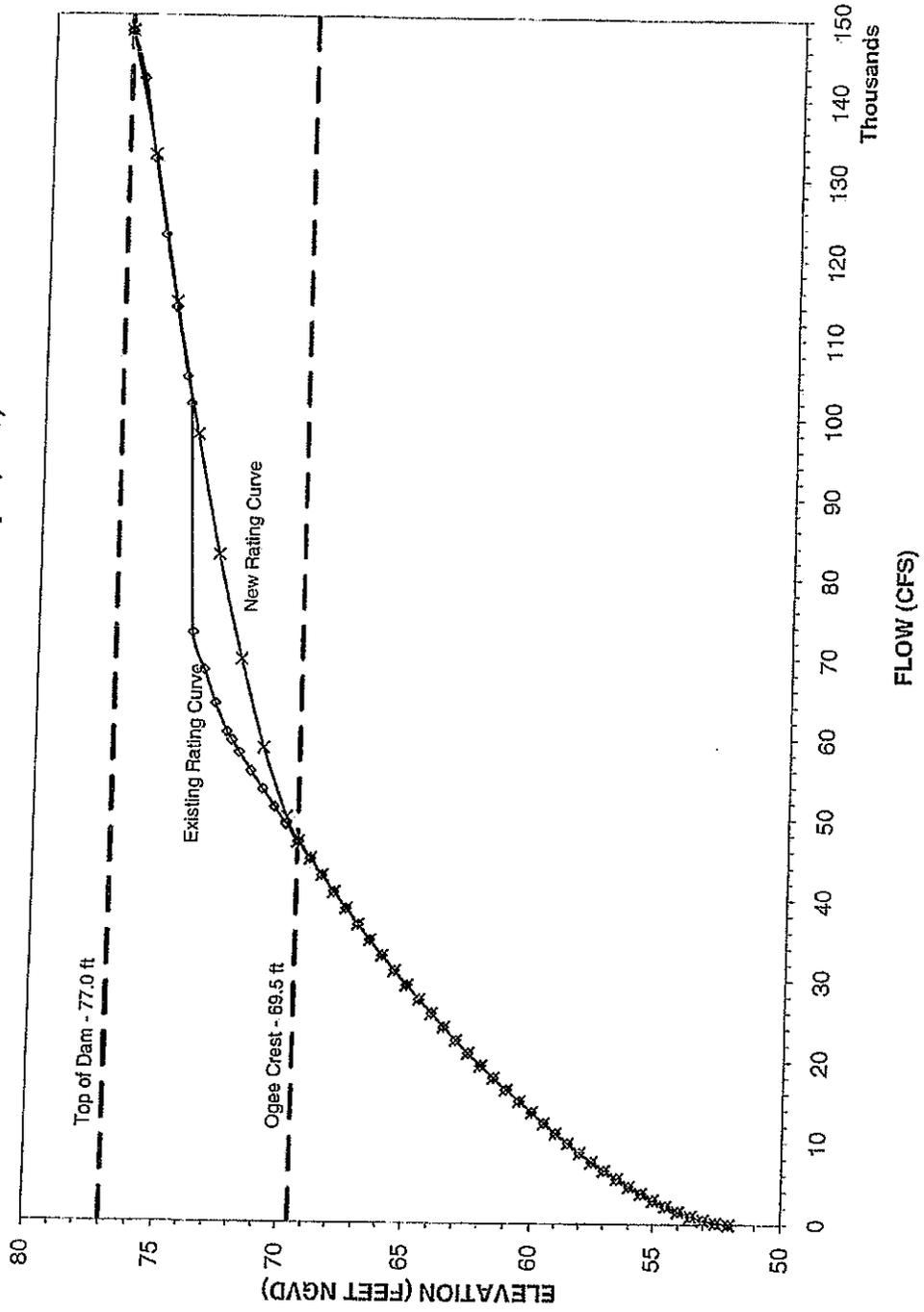


**JACKSON BLUFF DAM RATING CURVE**  
 (Updated on July 12, 2007)





JACKSON BLUFF DAM RATING CURVE  
(Updated on July 12, 2007)



50-Year Flood (Qp = 51,300 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	69.55	69.55	0	48928	49003	75	2.18	2.18	0
Tailwater	40.15	51.19	51.2	0.01	48928	49003	75	0.99	0.99	0
	40.5	50.64	50.65	0.01	48926	49001	75	1.24	1.24	0
Crooked Rd.	40.76	49.89	49.89	0	48925	48999	74	1.53	1.53	0
	40.97	49.01	49.02	0.01	48924	48998	74	1.52	1.52	0
	41.18	48.12	48.13	0.01	48923	48997	74	1.5	1.5	0
	41.39	47.26	47.26	0	48921	48995	74	1.48	1.48	0
	41.6	46.42	46.43	0.01	48920	48993	73	1.45	1.45	0
	41.81	45.63	45.63	0	48918	48991	73	1.41	1.41	0
	42.02	44.9	44.9	0	48915	48987	72	1.36	1.36	0
	42.23	44.24	44.25	0.01	48912	48983	71	1.29	1.29	0
	42.44	43.69	43.7	0.01	48908	48979	71	1.21	1.21	0
	42.65	43.24	43.25	0.01	48904	48973	69	1.14	1.14	0
	42.864	42.98	42.99	0.01	48899	48967	68	1.12	1.12	0
	43.077	42.76	42.77	0.01	48895	48962	67	1.11	1.11	0
	43.291	42.57	42.57	0	48891	48957	66	1.11	1.11	0
	43.505	42.39	42.4	0.01	48887	48952	65	1.1	1.1	0
	43.718	42.23	42.24	0.01	48883	48948	65	1.1	1.1	0
	43.932	42.08	42.09	0.01	48880	48943	63	1.1	1.1	0
	44.145	41.93	41.93	0	48877	48940	63	1.12	1.12	0
	44.359	41.77	41.77	0	48874	48936	62	1.14	1.14	0
	44.573	41.6	41.61	0.01	48871	48932	61	1.17	1.17	0
	44.786	41.41	41.42	0.01	48869	48929	60	1.22	1.22	0
	45	41.19	41.19	0	48866	48925	59	1.3	1.3	0
	45.207	40.99	41	0.01	48863	48922	59	1.3	1.3	0
	45.414	40.8	40.8	0	48861	48919	58	1.31	1.31	0
	45.621	40.6	40.61	0.01	48858	48916	58	1.32	1.32	0
	45.829	40.4	40.41	0.01	48856	48913	57	1.33	1.33	0
	46.036	40.2	40.2	0	48854	48910	56	1.35	1.35	0
	46.243	39.99	39.99	0	48852	48908	56	1.37	1.37	0
	46.45	39.77	39.77	0	48850	48905	55	1.39	1.39	0
	46.657	39.54	39.55	0.01	48848	48903	55	1.42	1.42	0
	46.864	39.31	39.32	0.01	48846	48901	55	1.45	1.45	0
	47.071	39.08	39.08	0	48845	48899	54	1.48	1.48	0
	47.279	38.83	38.84	0.01	48844	48897	53	1.52	1.52	0
	47.486	38.58	38.59	0.01	48842	48896	54	1.57	1.57	0
	47.693	38.32	38.33	0.01	48841	48895	54	1.62	1.62	0
	47.9	38.04	38.05	0.01	48841	48894	53	1.68	1.68	0
	48.1	37.65	37.65	0	48840	48893	53	1.67	1.67	0
	48.3	37.24	37.25	0.01	48839	48892	53	1.66	1.66	0
	48.5	36.83	36.84	0.01	48838	48891	53	1.65	1.65	0
	48.7	36.41	36.42	0.01	48837	48890	53	1.64	1.64	0
	48.9	35.98	35.99	0.01	48837	48889	52	1.63	1.63	0
	49.1	35.55	35.56	0.01	48836	48888	52	1.62	1.62	0
	49.3	35.12	35.13	0.01	48835	48887	52	1.61	1.61	0
	49.5	34.69	34.69	0	48834	48885	51	1.59	1.59	0
	49.7	34.26	34.27	0.01	48833	48884	51	1.58	1.58	0
	49.9	33.84	33.85	0.01	48832	48883	51	1.56	1.56	0
	50.1	33.43	33.43	0	48830	48881	51	1.54	1.54	0
	50.3	33.03	33.04	0.01	48829	48880	51	1.51	1.51	0
	50.5	32.65	32.65	0	48828	48878	50	1.48	1.48	0
	50.7	32.29	32.29	0	48826	48876	50	1.44	1.44	0
	50.9	31.95	31.96	0.01	48824	48874	50	1.4	1.4	0
	51.1	31.64	31.65	0.01	48823	48872	49	1.36	1.36	0
	51.3	31.36	31.37	0.01	48821	48869	48	1.3	1.31	0.01
	51.5	31.12	31.12	0	48819	48867	48	1.25	1.25	0
	51.705	30.95	30.96	0.01	48817	48865	48	1.26	1.26	0
	51.91	30.78	30.79	0.01	48815	48862	47	1.27	1.27	0
	52.115	30.61	30.61	0	48813	48860	47	1.28	1.28	0
	52.32	30.43	30.44	0.01	48811	48858	47	1.29	1.29	0
	52.525	30.25	30.26	0.01	48809	48855	46	1.3	1.3	0
	52.73	30.07	30.07	0	48807	48853	46	1.32	1.32	0
	52.935	29.88	29.88	0	48806	48851	45	1.33	1.33	0
	53.14	29.68	29.68	0	48804	48850	46	1.35	1.35	0
	53.345	29.48	29.48	0	48803	48848	45	1.36	1.36	0
	53.55	29.27	29.27	0	48801	48846	45	1.38	1.38	0
	53.755	29.06	29.06	0	48800	48844	44	1.4	1.4	0
	53.96	28.83	28.84	0.01	48798	48843	45	1.42	1.42	0
	54.165	28.61	28.61	0	48797	48841	44	1.45	1.45	0

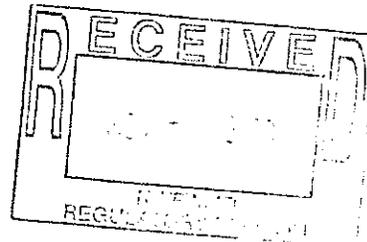
50-Year Flood (Qp = 51,300 cfs)

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	54.37	28.38	28.38	0	48796	48839	43	1.47	1.47	0
	54.575	28.14	28.14	0	48794	48838	44	1.5	1.5	0
	54.78	27.89	27.89	0	48793	48837	44	1.53	1.53	0
	54.985	27.63	27.63	0	48792	48835	43	1.56	1.57	0.01
	55.19	27.35	27.35	0	48791	48834	43	1.61	1.61	0
	55.395	27.05	27.05	0	48790	48833	43	1.66	1.66	0
	55.6	26.72	26.73	0.01	48788	48831	43	1.72	1.72	0
	55.809	26.19	26.2	0.01	48787	48830	43	1.71	1.71	0
	56.018	25.68	25.68	0	48785	48828	43	1.69	1.69	0
	56.227	25.19	25.19	0	48783	48825	42	1.67	1.67	0
	56.436	24.71	24.71	0	48780	48822	42	1.64	1.64	0
	56.645	24.26	24.26	0	48777	48819	42	1.61	1.61	0
	56.855	23.83	23.84	0.01	48773	48814	41	1.57	1.57	0
	57.064	23.44	23.44	0	48768	48809	41	1.53	1.53	0
	57.273	23.07	23.08	0.01	48763	48803	40	1.48	1.48	0
	57.482	22.76	22.76	0	48756	48796	40	1.42	1.42	0
	57.691	22.49	22.49	0	48749	48789	40	1.35	1.35	0
	57.9	22.26	22.26	0	48741	48781	40	1.27	1.27	0
	58.1	22.02	22.02	0	48733	48772	39	1.3	1.3	0
	58.3	21.77	21.77	0	48725	48763	38	1.33	1.33	0
	58.5	21.51	21.51	0	48716	48753	37	1.36	1.36	0
	58.7	21.24	21.25	0.01	48706	48743	37	1.38	1.38	0
	58.9	20.99	20.99	0	48695	48732	37	1.38	1.38	0
	59.1	20.76	20.76	0	48685	48720	35	1.38	1.38	0
	59.3	20.55	20.55	0	48674	48709	35	1.37	1.37	0
	59.5	20.36	20.36	0	48662	48697	35	1.35	1.35	0
	59.7	20.19	20.19	0	48651	48685	34	1.33	1.33	0
	59.9	20.04	20.04	0	48640	48673	33	1.3	1.3	0
	60.1	19.9	19.9	0	48628	48661	33	1.27	1.27	0
	60.3	19.78	19.78	0	48617	48649	32	1.24	1.24	0
	60.5	19.67	19.67	0	48605	48637	32	1.2	1.2	0
	60.7	19.57	19.57	0	48593	48625	32	1.16	1.16	0
	60.9	19.48	19.48	0	48582	48613	31	1.12	1.12	0
	61.1	19.41	19.41	0	48570	48601	31	1.09	1.09	0
	61.3	19.34	19.34	0	48558	48589	31	1.05	1.05	0
	61.5	19.28	19.28	0	48547	48577	30	1.01	1.01	0
	61.7	19.22	19.23	0.01	48536	48565	29	0.98	0.98	0
	61.9	19.08	19.08	0	48524	48554	30	0.98	0.98	0
	62.1	18.94	18.94	0	48513	48541	28	0.98	0.98	0
	62.3	18.79	18.79	0	48500	48529	29	0.98	0.98	0
	62.5	18.64	18.64	0	48488	48516	28	0.98	0.98	0
	62.7	18.48	18.49	0.01	48475	48502	27	0.98	0.98	0
	62.9	18.33	18.33	0	48461	48488	27	0.98	0.98	0
	63.1	18.17	18.17	0	48446	48473	27	0.98	0.98	0
	63.3	18.01	18.01	0	48431	48457	26	0.98	0.98	0
	63.5	17.85	17.85	0	48415	48441	26	0.97	0.97	0
	63.7	17.69	17.69	0	48399	48424	25	0.97	0.97	0
	63.9	17.52	17.53	0.01	48381	48406	25	0.97	0.97	0
	64.1	17.36	17.36	0	48363	48387	24	0.97	0.97	0
	64.3	17.2	17.2	0	48344	48368	24	0.97	0.97	0
	64.5	17.03	17.03	0	48324	48347	23	0.96	0.96	0
	64.7	16.87	16.87	0	48302	48325	23	0.96	0.96	0
	64.9	16.76	16.76	0	48280	48302	22	0.96	0.96	0
	65.1	16.65	16.65	0	48259	48280	21	0.96	0.96	0
	65.3	16.54	16.55	0.01	48237	48258	21	0.95	0.95	0
	65.5	16.44	16.44	0	48216	48236	20	0.95	0.95	0
	65.7	16.34	16.34	0	48195	48215	20	0.95	0.95	0
	65.9	16.24	16.25	0.01	48174	48193	19	0.94	0.94	0
	66.1	16.15	16.15	0	48153	48172	19	0.94	0.94	0
	66.3	16.05	16.06	0.01	48133	48151	18	0.94	0.94	0
	66.5	15.96	15.96	0	48113	48131	18	0.94	0.94	0
	66.7	15.87	15.87	0	48093	48111	18	0.93	0.93	0
	66.9	15.78	15.79	0.01	48074	48091	17	0.93	0.93	0
	67.1	15.7	15.7	0	48055	48072	17	0.93	0.93	0
	67.3	15.61	15.61	0	48036	48053	17	0.93	0.93	0
	67.5	15.53	15.53	0	48018	48035	17	0.93	0.93	0
	67.7	15.44	15.44	0	48001	48017	16	0.93	0.93	0
	67.9	15.38	15.38	0	47983	48000	17	0.94	0.94	0
	68.1	15.31	15.31	0	47966	47982	16	0.94	0.94	0

50-Year Flood (Qp = 51,300 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	68.3	15.24	15.24	0	47950	47966	16	0.95	0.95	0
	68.5	15.18	15.18	0	47934	47950	16	0.96	0.96	0
	68.7	15.11	15.11	0	47918	47934	16	0.96	0.96	0
	68.9	15.05	15.05	0	47903	47918	15	0.97	0.97	0
	69.1	14.98	14.98	0	47888	47903	15	0.98	0.98	0
	69.3	14.92	14.92	0	47873	47888	15	0.99	0.99	0
	69.5	14.85	14.85	0	47858	47873	15	0.99	0.99	0
	69.7	14.79	14.79	0	47844	47859	15	1	1	0
	69.9	14.73	14.73	0	47830	47844	14	1.01	1.01	0
	70.1	14.66	14.66	0	47816	47831	15	1.02	1.02	0
	70.3	14.6	14.6	0	47803	47817	14	1.02	1.02	0
	70.5	14.53	14.54	0.01	47790	47803	13	1.03	1.03	0
	70.7	14.47	14.47	0	47777	47790	13	1.04	1.04	0
	70.905	14.36	14.36	0	47763	47777	14	1.03	1.03	0
	71.111	14.25	14.25	0	47749	47763	14	1.01	1.01	0
	71.317	14.13	14.14	0.01	47735	47748	13	1	1	0
	71.522	14.02	14.02	0	47720	47733	13	0.99	0.99	0
	71.728	13.91	13.91	0	47705	47718	13	0.98	0.98	0
	71.933	13.8	13.81	0.01	47689	47702	13	0.97	0.97	0
	72.139	13.7	13.7	0	47673	47686	13	0.95	0.96	0.01
	72.344	13.59	13.59	0	47657	47670	13	0.94	0.94	0
	72.55	13.48	13.48	0	47640	47653	13	0.93	0.93	0
	72.756	13.37	13.37	0	47623	47635	12	0.92	0.92	0
	72.961	13.27	13.27	0	47605	47618	13	0.91	0.91	0
	73.167	13.16	13.16	0	47587	47599	12	0.9	0.9	0
	73.372	13.06	13.06	0	47568	47581	13	0.89	0.89	0
	73.578	12.95	12.95	0	47550	47562	12	0.88	0.88	0
	73.783	12.85	12.85	0	47530	47542	12	0.87	0.87	0
	73.989	12.74	12.74	0	47511	47523	12	0.86	0.86	0
	74.194	12.64	12.64	0	47491	47503	12	0.85	0.85	0
	74.4	12.54	12.54	0	47471	47482	11	0.84	0.84	0



100-Year Flood (Qp = 65,500 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	71.96	71.11	-0.85	59534	62634	3100	2.3	2.54	0.24
Tailwater	40.15	52.08	52.3	0.22	59534	62634	3100	1.09	1.11	0.02
Crooked Rd.	40.5	51.52	51.73	0.21	59531	62630	3099	1.33	1.36	0.03
	40.76	50.74	50.96	0.22	59529	62627	3098	1.61	1.64	0.03
	40.97	49.84	50.07	0.23	59527	62625	3098	1.6	1.62	0.02
	41.18	48.97	49.2	0.23	59525	62622	3097	1.58	1.61	0.03
	41.39	48.13	48.36	0.23	59523	62618	3095	1.56	1.58	0.02
	41.6	47.31	47.54	0.23	59519	62614	3095	1.52	1.55	0.03
	41.81	46.54	46.78	0.24	59515	62608	3093	1.48	1.5	0.02
	42.02	45.84	46.1	0.26	59510	62600	3090	1.42	1.43	0.01
	42.23	45.23	45.5	0.27	59504	62591	3087	1.34	1.35	0.01
	42.44	44.72	44.99	0.27	59496	62580	3084	1.24	1.26	0.02
	42.65	44.3	44.58	0.28	59487	62568	3081	1.14	1.16	0.02
	42.864	44.05	44.33	0.28	59478	62555	3077	1.17	1.18	0.01
	43.077	43.81	44.09	0.28	59470	62543	3073	1.18	1.2	0.02
	43.291	43.6	43.88	0.28	59463	62533	3070	1.18	1.2	0.02
	43.505	43.42	43.7	0.28	59456	62524	3068	1.18	1.21	0.03
	43.718	43.25	43.52	0.27	59449	62515	3066	1.19	1.21	0.02
	43.932	43.08	43.35	0.27	59444	62507	3063	1.19	1.22	0.03
	44.145	42.92	43.19	0.27	59438	62499	3061	1.21	1.23	0.02
	44.359	42.75	43.02	0.27	59433	62492	3059	1.23	1.26	0.03
	44.573	42.57	42.84	0.27	59428	62486	3058	1.26	1.29	0.03
	44.786	42.38	42.64	0.26	59423	62479	3056	1.31	1.34	0.03
	45	42.16	42.42	0.26	59418	62473	3055	1.38	1.41	0.03
	45.207	41.97	42.23	0.26	59414	62467	3053	1.39	1.41	0.02
	45.414	41.78	42.04	0.26	59410	62461	3051	1.4	1.42	0.02
	45.621	41.59	41.85	0.26	59406	62456	3050	1.41	1.43	0.02
	45.829	41.39	41.65	0.26	59402	62451	3049	1.42	1.44	0.02
	46.036	41.19	41.45	0.26	59398	62446	3048	1.43	1.46	0.03
	46.243	40.99	41.25	0.26	59395	62441	3046	1.45	1.48	0.03
	46.45	40.77	41.04	0.27	59392	62437	3045	1.47	1.5	0.03
	46.657	40.55	40.81	0.26	59389	62433	3044	1.5	1.53	0.03
	46.864	40.32	40.58	0.26	59386	62429	3043	1.53	1.56	0.03
	47.071	40.08	40.34	0.26	59383	62426	3043	1.57	1.59	0.02
	47.279	39.82	40.08	0.26	59381	62423	3042	1.61	1.64	0.03
	47.486	39.53	39.79	0.26	59379	62420	3041	1.66	1.69	0.03
	47.693	39.23	39.48	0.25	59377	62417	3040	1.73	1.75	0.02
	47.9	38.9	39.14	0.24	59375	62414	3039	1.8	1.83	0.03
	48.1	38.5	38.73	0.23	59373	62412	3039	1.79	1.82	0.03
	48.3	38.08	38.31	0.23	59372	62410	3038	1.78	1.81	0.03
	48.5	37.65	37.88	0.23	59370	62407	3037	1.77	1.8	0.03
	48.7	37.22	37.44	0.22	59368	62405	3037	1.75	1.79	0.04
	48.9	36.78	37	0.22	59367	62402	3035	1.74	1.77	0.03
49.1	36.34	36.56	0.22	59365	62400	3035	1.73	1.76	0.03	
49.3	35.91	36.13	0.22	59363	62397	3034	1.72	1.75	0.03	
49.5	35.48	35.69	0.21	59361	62394	3033	1.7	1.73	0.03	
49.7	35.05	35.27	0.22	59359	62391	3032	1.69	1.71	0.02	
49.9	34.63	34.85	0.22	59356	62387	3031	1.67	1.69	0.02	
50.1	34.22	34.44	0.22	59354	62384	3030	1.64	1.67	0.03	
50.3	33.83	34.05	0.22	59351	62380	3029	1.61	1.64	0.03	
50.5	33.45	33.67	0.22	59348	62375	3027	1.58	1.61	0.03	
50.7	33.1	33.32	0.22	59345	62371	3026	1.54	1.57	0.03	
50.9	32.76	32.99	0.23	59342	62366	3024	1.5	1.53	0.03	
51.1	32.46	32.68	0.22	59338	62360	3022	1.46	1.48	0.02	
51.3	32.18	32.4	0.22	59334	62355	3021	1.4	1.43	0.03	
51.5	31.93	32.15	0.22	59330	62349	3019	1.35	1.38	0.03	
51.705	31.76	31.98	0.22	59326	62343	3017	1.36	1.39	0.03	
51.91	31.58	31.8	0.22	59323	62338	3015	1.37	1.4	0.03	
52.115	31.4	31.62	0.22	59319	62332	3013	1.38	1.41	0.03	
52.32	31.22	31.43	0.21	59315	62327	3012	1.39	1.42	0.03	
52.525	31.03	31.24	0.21	59312	62322	3010	1.4	1.43	0.03	
52.73	30.84	31.05	0.21	59308	62317	3009	1.42	1.44	0.02	
52.935	30.64	30.84	0.2	59305	62312	3007	1.43	1.46	0.03	
53.14	30.43	30.64	0.21	59302	62307	3005	1.45	1.47	0.02	
53.345	30.22	30.43	0.21	59299	62302	3003	1.46	1.49	0.03	
53.55	30.01	30.21	0.2	59296	62298	3002	1.48	1.51	0.03	
53.755	29.79	29.98	0.19	59293	62293	3000	1.5	1.53	0.03	
53.96	29.56	29.75	0.19	59290	62289	2999	1.53	1.55	0.02	
54.165	29.32	29.52	0.2	59287	62284	2997	1.55	1.58	0.03	

100-Year Flood (Qp = 65,500 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	54.37	29.08	29.27	0.19	59284	62280	2996	1.58	1.6	0.02
	54.575	28.83	29.02	0.19	59281	62276	2995	1.6	1.63	0.03
	54.78	28.58	28.77	0.19	59279	62272	2993	1.63	1.66	0.03
	54.985	28.31	28.5	0.19	59276	62268	2992	1.67	1.7	0.03
	55.19	28.03	28.22	0.19	59273	62263	2990	1.71	1.73	0.02
	55.395	27.74	27.93	0.19	59270	62259	2989	1.75	1.78	0.03
	55.6	27.42	27.61	0.19	59267	62254	2987	1.81	1.83	0.02
	55.809	26.92	27.11	0.19	59264	62249	2985	1.79	1.81	0.02
	56.018	26.43	26.63	0.2	59260	62242	2982	1.77	1.79	0.02
	56.227	25.96	26.17	0.21	59255	62234	2979	1.74	1.76	0.02
	56.436	25.52	25.73	0.21	59249	62225	2976	1.71	1.73	0.02
	56.645	25.09	25.31	0.22	59242	62215	2973	1.67	1.69	0.02
	56.855	24.69	24.92	0.23	59234	62203	2969	1.63	1.65	0.02
	57.064	24.33	24.56	0.23	59225	62189	2964	1.58	1.6	0.02
	57.273	24.01	24.25	0.24	59215	62173	2958	1.52	1.54	0.02
	57.482	23.73	23.97	0.24	59203	62156	2953	1.45	1.47	0.02
	57.691	23.49	23.74	0.25	59191	62138	2947	1.38	1.4	0.02
	57.9	23.28	23.53	0.25	59177	62119	2942	1.31	1.34	0.03
	58.1	23.06	23.32	0.26	59164	62099	2935	1.33	1.35	0.02
	58.3	22.84	23.1	0.26	59151	62079	2928	1.35	1.36	0.01
	58.5	22.61	22.88	0.27	59136	62058	2922	1.38	1.38	0
	58.7	22.39	22.65	0.26	59121	62036	2915	1.4	1.4	0
	58.9	22.16	22.43	0.27	59105	62013	2908	1.41	1.41	0
	59.1	21.93	22.21	0.28	59087	61988	2901	1.4	1.4	0
	59.3	21.71	21.99	0.28	59070	61962	2892	1.39	1.39	0
	59.5	21.52	21.79	0.27	59052	61936	2884	1.38	1.38	0
	59.7	21.34	21.61	0.27	59034	61910	2876	1.35	1.37	0.02
	59.9	21.17	21.44	0.27	59016	61883	2867	1.32	1.35	0.03
	60.1	21.03	21.29	0.26	58998	61857	2859	1.3	1.32	0.02
	60.3	20.9	21.16	0.26	58980	61830	2850	1.27	1.3	0.03
	60.5	20.78	21.04	0.26	58963	61804	2841	1.24	1.27	0.03
	60.7	20.67	20.93	0.26	58945	61778	2833	1.21	1.24	0.03
	60.9	20.58	20.83	0.25	58927	61752	2825	1.18	1.21	0.03
	61.1	20.5	20.75	0.25	58910	61726	2816	1.15	1.18	0.03
	61.3	20.42	20.67	0.25	58892	61701	2809	1.12	1.14	0.02
	61.5	20.35	20.6	0.25	58875	61676	2801	1.09	1.11	0.02
	61.7	20.29	20.54	0.25	58858	61651	2793	1.05	1.08	0.03
	61.9	20.15	20.39	0.24	58842	61626	2784	1.05	1.08	0.03
	62.1	20.01	20.25	0.24	58824	61601	2777	1.05	1.08	0.03
	62.3	19.86	20.1	0.24	58806	61574	2768	1.05	1.07	0.02
	62.5	19.71	19.95	0.24	58787	61547	2760	1.05	1.07	0.02
	62.7	19.56	19.8	0.24	58768	61519	2751	1.04	1.07	0.03
	62.9	19.4	19.64	0.24	58748	61489	2741	1.04	1.06	0.02
	63.1	19.25	19.49	0.24	58727	61459	2732	1.03	1.06	0.03
	63.3	19.1	19.33	0.23	58706	61428	2722	1.03	1.05	0.02
	63.5	18.94	19.18	0.24	58684	61395	2711	1.02	1.04	0.02
	63.7	18.79	19.03	0.24	58661	61361	2700	1.01	1.04	0.03
	63.9	18.63	18.87	0.24	58637	61326	2689	1.01	1.03	0.02
	64.1	18.48	18.71	0.23	58612	61290	2678	1	1.02	0.02
	64.3	18.32	18.56	0.24	58586	61252	2666	0.99	1.01	0.02
	64.5	18.16	18.4	0.24	58559	61213	2654	0.98	1	0.02
	64.7	18.01	18.25	0.24	58531	61172	2641	0.98	0.99	0.01
	64.9	17.9	18.14	0.24	58503	61131	2628	0.98	0.99	0.01
	65.1	17.8	18.04	0.24	58474	61090	2616	0.98	0.99	0.01
	65.3	17.7	17.94	0.24	58447	61050	2603	0.98	0.99	0.01
	65.5	17.6	17.84	0.24	58420	61010	2590	0.97	0.99	0.02
	65.7	17.51	17.75	0.24	58393	60971	2578	0.97	0.99	0.02
	65.9	17.41	17.65	0.24	58366	60933	2567	0.97	0.99	0.02
	66.1	17.32	17.56	0.24	58341	60896	2555	0.97	0.99	0.02
	66.3	17.23	17.47	0.24	58315	60859	2544	0.97	0.99	0.02
	66.5	17.14	17.37	0.23	58291	60823	2532	0.97	0.99	0.02
	66.7	17.05	17.28	0.23	58266	60788	2522	0.97	0.99	0.02
	66.9	16.96	17.19	0.23	58243	60753	2510	0.97	1	0.03
	67.1	16.87	17.11	0.24	58220	60720	2500	0.98	1	0.02
	67.3	16.78	17.02	0.24	58197	60687	2490	0.98	1	0.02
	67.5	16.7	16.93	0.23	58175	60655	2480	0.99	1.01	0.02
	67.7	16.61	16.84	0.23	58154	60624	2470	0.99	1.01	0.02
	67.9	16.54	16.77	0.23	58133	60594	2461	1	1.02	0.02
	68.1	16.47	16.7	0.23	58112	60564	2452	1.01	1.03	0.02

100-Year Flood (Qp = 65,500 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	68.3	16.4	16.63	0.23	58092	60535	2443	1.02	1.04	0.02
	68.5	16.33	16.55	0.22	58073	60507	2434	1.03	1.05	0.02
	68.7	16.25	16.48	0.23	58054	60479	2425	1.03	1.06	0.03
	68.9	16.18	16.41	0.23	58036	60452	2416	1.04	1.07	0.03
	69.1	16.11	16.33	0.22	58018	60427	2409	1.05	1.07	0.02
	69.3	16.04	16.26	0.22	58000	60402	2402	1.06	1.08	0.02
	69.5	15.97	16.19	0.22	57983	60377	2394	1.07	1.09	0.02
	69.7	15.9	16.12	0.22	57966	60353	2387	1.08	1.1	0.02
	69.9	15.83	16.05	0.22	57950	60329	2379	1.09	1.11	0.02
	70.1	15.77	15.98	0.21	57934	60306	2372	1.09	1.12	0.03
	70.3	15.7	15.91	0.21	57918	60284	2366	1.1	1.13	0.03
	70.5	15.63	15.84	0.21	57903	60262	2359	1.11	1.14	0.03
	70.7	15.56	15.77	0.21	57888	60240	2352	1.12	1.14	0.02
	70.905	15.44	15.64	0.2	57872	60217	2345	1.11	1.13	0.02
	71.111	15.32	15.52	0.2	57856	60194	2338	1.09	1.11	0.02
	71.317	15.2	15.4	0.2	57839	60171	2332	1.08	1.1	0.02
	71.522	15.08	15.28	0.2	57823	60147	2324	1.08	1.09	0.03
	71.728	14.97	15.16	0.19	57805	60122	2317	1.05	1.07	0.02
	71.933	14.85	15.05	0.2	57788	60097	2309	1.04	1.06	0.02
	72.139	14.74	14.93	0.19	57770	60071	2301	1.02	1.04	0.02
	72.344	14.62	14.81	0.19	57751	60044	2293	1.01	1.03	0.02
	72.55	14.51	14.7	0.19	57732	60017	2285	1	1.02	0.02
	72.756	14.4	14.58	0.18	57713	59990	2277	0.99	1.01	0.02
	72.961	14.28	14.47	0.19	57693	59962	2269	0.97	0.99	0.02
	73.167	14.17	14.35	0.18	57673	59933	2260	0.96	0.98	0.02
	73.372	14.06	14.24	0.18	57653	59904	2251	0.95	0.97	0.02
	73.578	13.95	14.12	0.17	57632	59874	2242	0.94	0.96	0.02
	73.783	13.84	14.01	0.17	57611	59844	2233	0.93	0.95	0.02
	73.989	13.73	13.9	0.17	57589	59813	2224	0.92	0.94	0.02
	74.194	13.62	13.79	0.17	57568	59782	2214	0.91	0.93	0.02
	74.4	13.51	13.68	0.17	57545	59750	2205	0.9	0.92	0.02

500-Year Flood (Qp = 109,000 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	74.61	74.41	-0.2	107342	106374	-968	3.62	3.62	0
Tailwater	40.15	55.1	55.05	-0.05	107342	106374	-968	1.5	1.44	-0.06
Crooked Rd.	40.5	54.43	54.38	-0.05	107334	106364	-970	1.72	1.7	-0.02
	40.76	53.65	53.6	-0.05	107328	106357	-971	1.98	1.96	-0.02
	40.97	52.84	52.78	-0.06	107323	106350	-973	1.95	1.93	-0.02
	41.18	52.06	52	-0.06	107317	106342	-975	1.92	1.89	-0.03
	41.39	51.32	51.25	-0.07	107309	106333	-976	1.88	1.83	-0.05
	41.6	50.63	50.56	-0.07	107301	106321	-980	1.84	1.77	-0.07
	41.81	50	49.94	-0.06	107291	106307	-984	1.77	1.69	-0.08
	42.02	49.44	49.37	-0.07	107279	106291	-988	1.7	1.61	-0.09
	42.23	48.95	48.88	-0.07	107265	106272	-993	1.6	1.51	-0.09
	42.44	48.53	48.46	-0.07	107250	106252	-998	1.5	1.41	-0.09
	42.65	48.18	48.11	-0.07	107234	106231	-1003	1.37	1.29	-0.08
	42.864	47.95	47.87	-0.08	107218	106209	-1009	1.41	1.34	-0.07
	43.077	47.7	47.63	-0.07	107203	106189	-1014	1.44	1.38	-0.06
	43.291	47.46	47.38	-0.08	107189	106171	-1018	1.46	1.42	-0.04
	43.505	47.23	47.15	-0.08	107178	106155	-1023	1.47	1.45	-0.02
	43.718	47.01	46.94	-0.07	107167	106141	-1026	1.48	1.48	0
	43.932	46.8	46.73	-0.07	107157	106128	-1029	1.5	1.5	0
	44.145	46.6	46.53	-0.07	107148	106116	-1032	1.53	1.52	-0.01
	44.359	46.4	46.33	-0.07	107140	106105	-1035	1.56	1.55	-0.01
	44.573	46.19	46.12	-0.07	107132	106094	-1038	1.6	1.59	-0.01
	44.786	45.97	45.9	-0.07	107124	106084	-1040	1.64	1.64	0
	45	45.73	45.66	-0.07	107117	106074	-1043	1.7	1.7	0
	45.207	45.54	45.47	-0.07	107110	106065	-1045	1.71	1.71	0
	45.414	45.35	45.28	-0.07	107104	106057	-1047	1.73	1.72	-0.01
	45.621	45.16	45.09	-0.07	107098	106048	-1050	1.74	1.73	-0.01
	45.829	44.96	44.89	-0.07	107092	106040	-1052	1.76	1.75	-0.01
	46.036	44.75	44.69	-0.06	107086	106033	-1053	1.77	1.77	0
	46.243	44.54	44.48	-0.06	107081	106026	-1055	1.79	1.79	0
	46.45	44.32	44.26	-0.06	107076	106019	-1057	1.82	1.81	-0.01
	46.657	44.09	44.03	-0.06	107071	106013	-1058	1.85	1.84	-0.01
	46.864	43.85	43.78	-0.07	107067	106007	-1060	1.88	1.87	-0.01
	47.071	43.59	43.52	-0.07	107062	106001	-1061	1.92	1.91	-0.01
	47.279	43.3	43.24	-0.06	107058	105995	-1063	1.96	1.95	-0.01
	47.486	42.98	42.92	-0.06	107054	105990	-1064	2.01	2.01	0
	47.693	42.63	42.57	-0.06	107050	105985	-1065	2.08	2.07	-0.01
	47.9	42.24	42.17	-0.07	107046	105980	-1066	2.16	2.15	-0.01
	48.1	41.77	41.71	-0.06	107042	105975	-1067	2.15	2.14	-0.01
	48.3	41.3	41.24	-0.06	107038	105969	-1069	2.14	2.14	0
	48.5	40.83	40.77	-0.06	107033	105964	-1069	2.14	2.13	-0.01
	48.7	40.37	40.3	-0.07	107029	105957	-1072	2.13	2.12	-0.01
48.9	39.9	39.84	-0.06	107023	105950	-1073	2.12	2.11	-0.01	
49.1	39.45	39.38	-0.07	107018	105943	-1075	2.1	2.1	0	
49.3	39.01	38.94	-0.07	107012	105936	-1076	2.09	2.08	-0.01	
49.5	38.57	38.51	-0.06	107005	105928	-1077	2.07	2.06	-0.01	
49.7	38.15	38.09	-0.06	106998	105919	-1079	2.04	2.04	0	
49.9	37.75	37.68	-0.07	106990	105910	-1080	2.02	2.01	-0.01	
50.1	37.35	37.29	-0.06	106982	105900	-1082	1.99	1.98	-0.01	
50.3	36.98	36.91	-0.07	106974	105889	-1085	1.95	1.95	0	
50.5	36.62	36.55	-0.07	106964	105877	-1087	1.92	1.91	-0.01	
50.7	36.28	36.21	-0.07	106954	105865	-1089	1.87	1.87	0	
50.9	35.96	35.9	-0.06	106943	105852	-1091	1.83	1.82	-0.01	
51.1	35.67	35.6	-0.07	106932	105839	-1093	1.78	1.78	0	
51.3	35.39	35.33	-0.06	106920	105824	-1096	1.73	1.73	0	
51.5	35.14	35.07	-0.07	106908	105810	-1098	1.68	1.67	-0.01	
51.705	34.95	34.88	-0.07	106895	105795	-1100	1.69	1.68	-0.01	
51.91	34.76	34.69	-0.07	106882	105780	-1102	1.7	1.69	-0.01	
52.115	34.56	34.49	-0.07	106869	105764	-1105	1.71	1.7	-0.01	
52.32	34.35	34.29	-0.06	106856	105749	-1107	1.72	1.71	-0.01	
52.525	34.14	34.08	-0.06	106843	105734	-1109	1.73	1.72	-0.01	
52.73	33.93	33.86	-0.07	106829	105719	-1110	1.74	1.74	0	
52.935	33.71	33.65	-0.06	106816	105703	-1113	1.75	1.75	0	
53.14	33.49	33.42	-0.07	106802	105687	-1115	1.77	1.76	-0.01	
53.345	33.26	33.2	-0.06	106787	105672	-1115	1.78	1.78	0	
53.55	33.03	32.96	-0.07	106773	105656	-1117	1.8	1.79	-0.01	
53.755	32.79	32.72	-0.07	106758	105639	-1119	1.82	1.81	-0.01	
53.96	32.54	32.48	-0.06	106742	105622	-1120	1.84	1.83	-0.01	
54.165	32.29	32.22	-0.07	106726	105605	-1121	1.86	1.85	-0.01	

500-Year Flood (Qp = 109,000 cfs)

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	54.37	32.03	31.96	-0.07	106709	105587	-1122	1.88	1.88	0
	54.575	31.76	31.7	-0.06	106692	105568	-1124	1.91	1.9	-0.01
	54.78	31.49	31.42	-0.07	106674	105549	-1125	1.94	1.93	-0.01
	54.985	31.21	31.14	-0.07	106654	105529	-1125	1.97	1.96	-0.01
	55.19	30.92	30.86	-0.06	106634	105508	-1126	2	1.99	-0.01
	55.395	30.63	30.57	-0.06	106612	105485	-1127	2.04	2.03	-0.01
	55.6	30.33	30.27	-0.06	106589	105462	-1127	2.08	2.06	-0.02
	55.809	29.92	29.86	-0.06	106563	105435	-1128	2.06	2.04	-0.02
	56.018	29.53	29.47	-0.06	106534	105405	-1129	2.03	2	-0.03
	56.227	29.17	29.11	-0.06	106501	105372	-1129	2	1.97	-0.03
	56.436	28.84	28.77	-0.07	106464	105334	-1130	1.96	1.92	-0.04
	56.645	28.53	28.46	-0.07	106423	105293	-1130	1.92	1.88	-0.04
	56.855	28.25	28.18	-0.07	106379	105249	-1130	1.87	1.82	-0.05
	57.064	27.99	27.92	-0.07	106331	105201	-1130	1.82	1.77	-0.05
	57.273	27.77	27.7	-0.07	106281	105151	-1130	1.76	1.71	-0.05
	57.482	27.57	27.49	-0.08	106227	105098	-1129	1.69	1.65	-0.04
	57.691	27.39	27.31	-0.08	106172	105043	-1129	1.63	1.59	-0.04
	57.9	27.23	27.15	-0.08	106115	104987	-1128	1.57	1.53	-0.04
	58.1	27.05	26.98	-0.07	106058	104932	-1126	1.57	1.54	-0.03
	58.3	26.88	26.81	-0.07	106000	104875	-1125	1.58	1.54	-0.04
	58.5	26.71	26.64	-0.07	105939	104816	-1123	1.58	1.54	-0.04
	58.7	26.54	26.47	-0.07	105877	104755	-1122	1.59	1.55	-0.04
	58.9	26.38	26.3	-0.08	105812	104693	-1119	1.59	1.54	-0.05
	59.1	26.21	26.14	-0.07	105745	104629	-1116	1.59	1.54	-0.05
	59.3	26.05	25.98	-0.07	105677	104563	-1114	1.58	1.54	-0.04
	59.5	25.9	25.82	-0.08	105606	104495	-1111	1.58	1.53	-0.05
	59.7	25.75	25.67	-0.08	105534	104426	-1108	1.57	1.52	-0.05
	59.9	25.6	25.53	-0.07	105459	104356	-1103	1.55	1.51	-0.04
	60.1	25.47	25.39	-0.08	105384	104284	-1100	1.54	1.49	-0.05
	60.3	25.33	25.25	-0.08	105306	104211	-1095	1.52	1.48	-0.04
	60.5	25.21	25.12	-0.09	105228	104137	-1091	1.5	1.46	-0.04
	60.7	25.09	25	-0.09	105148	104063	-1085	1.48	1.44	-0.04
	60.9	24.97	24.89	-0.08	105068	103988	-1080	1.45	1.41	-0.04
	61.1	24.86	24.78	-0.08	104987	103912	-1075	1.42	1.39	-0.03
	61.3	24.76	24.68	-0.08	104907	103837	-1070	1.39	1.36	-0.03
	61.5	24.67	24.59	-0.08	104827	103762	-1065	1.36	1.34	-0.02
	61.7	24.59	24.51	-0.08	104748	103688	-1060	1.33	1.31	-0.02
	61.9	24.45	24.37	-0.08	104668	103613	-1055	1.33	1.3	-0.03
	62.1	24.32	24.24	-0.08	104585	103537	-1048	1.32	1.29	-0.03
	62.3	24.19	24.11	-0.08	104501	103458	-1043	1.31	1.29	-0.02
	62.5	24.05	23.97	-0.08	104415	103378	-1037	1.3	1.28	-0.02
	62.7	23.92	23.83	-0.09	104327	103295	-1032	1.3	1.27	-0.03
	62.9	23.78	23.7	-0.08	104237	103211	-1026	1.29	1.26	-0.03
	63.1	23.65	23.56	-0.09	104144	103125	-1019	1.28	1.25	-0.03
	63.3	23.51	23.43	-0.08	104050	103037	-1013	1.27	1.24	-0.03
	63.5	23.38	23.3	-0.08	103954	102947	-1007	1.26	1.22	-0.04
	63.7	23.24	23.16	-0.08	103856	102855	-1001	1.24	1.21	-0.03
	63.9	23.11	23.03	-0.08	103757	102761	-996	1.23	1.2	-0.03
	64.1	22.98	22.9	-0.08	103656	102666	-990	1.22	1.18	-0.04
	64.3	22.85	22.77	-0.08	103553	102568	-985	1.2	1.17	-0.03
	64.5	22.72	22.64	-0.08	103449	102470	-979	1.18	1.15	-0.03
	64.7	22.6	22.52	-0.08	103344	102370	-974	1.17	1.13	-0.04
	64.9	22.52	22.43	-0.09	103240	102270	-970	1.17	1.13	-0.04
	65.1	22.43	22.35	-0.08	103139	102174	-965	1.17	1.14	-0.03
	65.3	22.35	22.27	-0.08	103042	102081	-961	1.17	1.14	-0.03
	65.5	22.27	22.19	-0.08	102948	101992	-956	1.17	1.14	-0.03
	65.7	22.19	22.11	-0.08	102858	101905	-953	1.17	1.14	-0.03
	65.9	22.11	22.02	-0.09	102771	101821	-950	1.17	1.15	-0.02
	66.1	22.02	21.94	-0.08	102688	101740	-948	1.18	1.15	-0.03
	66.3	21.94	21.86	-0.08	102607	101663	-944	1.18	1.16	-0.02
	66.5	21.86	21.77	-0.09	102530	101588	-942	1.19	1.16	-0.03
	66.7	21.77	21.69	-0.08	102456	101517	-939	1.19	1.17	-0.02
	66.9	21.69	21.6	-0.09	102386	101448	-938	1.2	1.17	-0.03
	67.1	21.6	21.52	-0.08	102318	101382	-936	1.2	1.18	-0.02
	67.3	21.51	21.43	-0.08	102254	101319	-935	1.21	1.19	-0.02
	67.5	21.42	21.34	-0.08	102192	101258	-934	1.22	1.19	-0.03
	67.7	21.32	21.24	-0.08	102132	101201	-931	1.23	1.2	-0.03
	67.9	21.24	21.16	-0.08	102075	101145	-930	1.23	1.21	-0.02
	68.1	21.16	21.08	-0.08	102020	101092	-928	1.24	1.22	-0.02

500-Year Flood (Qp = 109,000 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	68.3	21.07	20.99	-0.08	101968	101042	-926	1.25	1.23	-0.02
	68.5	20.99	20.91	-0.08	101919	100994	-925	1.26	1.24	-0.02
	68.7	20.9	20.82	-0.08	101871	100949	-922	1.27	1.25	-0.02
	68.9	20.81	20.73	-0.08	101826	100905	-921	1.28	1.26	-0.02
	69.1	20.72	20.64	-0.08	101782	100864	-918	1.3	1.27	-0.03
	69.3	20.63	20.55	-0.08	101741	100825	-916	1.31	1.28	-0.03
	69.5	20.53	20.46	-0.07	101702	100787	-915	1.32	1.3	-0.02
	69.7	20.44	20.36	-0.08	101665	100752	-913	1.34	1.31	-0.03
	69.9	20.33	20.26	-0.07	101630	100719	-911	1.35	1.32	-0.03
	70.1	20.23	20.16	-0.07	101597	100688	-909	1.36	1.33	-0.03
	70.3	20.13	20.05	-0.08	101567	100660	-907	1.37	1.34	-0.03
	70.5	20.02	19.95	-0.07	101539	100634	-905	1.38	1.35	-0.03
	70.7	19.92	19.85	-0.07	101514	100612	-902	1.39	1.36	-0.03
	70.905	19.75	19.68	-0.07	101491	100590	-901	1.37	1.34	-0.03
	71.111	19.57	19.51	-0.06	101469	100570	-899	1.35	1.32	-0.03
	71.317	19.4	19.34	-0.06	101447	100551	-896	1.33	1.3	-0.03
	71.522	19.23	19.17	-0.06	101427	100533	-894	1.31	1.28	-0.03
	71.728	19.05	18.99	-0.06	101408	100516	-892	1.29	1.26	-0.03
	71.933	18.88	18.82	-0.06	101391	100500	-891	1.27	1.25	-0.02
	72.139	18.71	18.65	-0.06	101374	100485	-889	1.25	1.23	-0.02
	72.344	18.53	18.48	-0.05	101358	100472	-886	1.24	1.21	-0.03
	72.55	18.36	18.31	-0.05	101343	100459	-884	1.22	1.2	-0.02
	72.756	18.19	18.15	-0.04	101330	100448	-882	1.2	1.18	-0.02
	72.961	18.02	17.98	-0.04	101317	100437	-880	1.19	1.16	-0.03
	73.167	17.85	17.81	-0.04	101305	100428	-877	1.17	1.15	-0.02
	73.372	17.68	17.64	-0.04	101295	100420	-875	1.15	1.13	-0.02
	73.578	17.51	17.47	-0.04	101285	100412	-873	1.14	1.12	-0.02
	73.783	17.34	17.3	-0.04	101276	100406	-870	1.12	1.1	-0.02
	73.989	17.17	17.14	-0.03	101269	100401	-868	1.11	1.09	-0.02
	74.194	17	16.97	-0.03	101262	100396	-866	1.09	1.08	-0.01
	74.4	16.83	16.81	-0.02	101256	100393	-863	1.08	1.06	-0.02

IDF (Qp = 154,500 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	77.08	77.09	0.01	152128	151516	-612	4.57	4.55	-0.02
Tailwater	40.15	57.5	57.47	-0.03	152128	151516	-612	1.68	1.68	0
	40.5	56.78	56.75	-0.03	152111	151499	-612	1.95	1.95	0
Crooked Rd.	40.76	56.01	55.98	-0.03	152098	151486	-612	2.2	2.2	0
	40.97	55.25	55.22	-0.03	152086	151475	-611	2.15	2.15	0
	41.16	54.54	54.5	-0.04	152073	151461	-612	2.09	2.09	0
	41.39	53.86	53.83	-0.03	152057	151446	-611	2.02	2.02	0
	41.6	53.24	53.21	-0.03	152039	151428	-611	1.94	1.94	0
	41.81	52.68	52.64	-0.04	152019	151407	-612	1.85	1.85	0
	42.02	52.17	52.13	-0.04	151995	151384	-611	1.75	1.75	0
	42.23	51.73	51.69	-0.04	151970	151359	-611	1.64	1.64	0
	42.44	51.35	51.32	-0.03	151943	151331	-612	1.53	1.53	0
	42.65	51.04	51.01	-0.03	151914	151302	-612	1.42	1.42	0
	42.864	50.83	50.79	-0.04	151885	151274	-611	1.46	1.46	0
	43.077	50.6	50.57	-0.03	151858	151246	-612	1.51	1.51	0
	43.291	50.36	50.32	-0.04	151832	151221	-611	1.56	1.56	0
	43.505	50.1	50.06	-0.04	151809	151198	-611	1.62	1.62	0
	43.718	49.84	49.8	-0.04	151787	151176	-611	1.67	1.67	0
	43.932	49.59	49.55	-0.04	151769	151158	-611	1.72	1.71	-0.01
	44.145	49.35	49.32	-0.03	151752	151141	-611	1.75	1.75	0
	44.359	49.12	49.09	-0.03	151737	151126	-611	1.79	1.79	0
	44.573	48.89	48.85	-0.04	151722	151112	-610	1.84	1.83	-0.01
	44.786	48.64	48.61	-0.03	151708	151098	-610	1.89	1.88	-0.01
	45	48.38	48.35	-0.03	151694	151084	-610	1.95	1.95	0
	45.207	48.19	48.15	-0.04	151682	151072	-610	1.96	1.96	0
	45.414	47.99	47.95	-0.04	151670	151060	-610	1.98	1.97	-0.01
	45.621	47.78	47.75	-0.03	151658	151048	-610	1.99	1.99	0
	45.829	47.57	47.54	-0.03	151646	151037	-609	2.01	2.01	0
	46.036	47.36	47.32	-0.04	151635	151026	-609	2.03	2.03	0
	46.243	47.13	47.1	-0.03	151625	151015	-610	2.06	2.05	-0.01
	46.45	46.89	46.86	-0.03	151614	151005	-609	2.09	2.08	-0.01
	46.657	46.64	46.61	-0.03	151604	150995	-609	2.12	2.11	-0.01
	46.864	46.38	46.34	-0.04	151594	150985	-609	2.15	2.15	0
	47.071	46.09	46.05	-0.04	151585	150975	-610	2.19	2.19	0
	47.279	45.78	45.75	-0.03	151576	150966	-610	2.24	2.24	0
	47.486	45.44	45.41	-0.03	151566	150957	-609	2.3	2.29	-0.01
	47.693	45.08	45.05	-0.03	151557	150947	-610	2.36	2.36	0
	47.9	44.68	44.65	-0.03	151547	150938	-609	2.44	2.44	0
	48.1	44.22	44.19	-0.03	151538	150928	-610	2.43	2.42	-0.01
	48.3	43.76	43.73	-0.03	151528	150918	-610	2.41	2.41	0
	48.5	43.3	43.27	-0.03	151516	150907	-609	2.39	2.39	0
	48.7	42.85	42.82	-0.03	151504	150895	-609	2.38	2.37	-0.01
	48.9	42.41	42.37	-0.04	151491	150881	-610	2.36	2.35	-0.01
	49.1	41.97	41.94	-0.03	151476	150867	-609	2.34	2.33	-0.01
	49.3	41.54	41.51	-0.03	151461	150852	-609	2.31	2.31	0
	49.5	41.12	41.09	-0.03	151444	150835	-609	2.29	2.29	0
	49.7	40.72	40.68	-0.04	151426	150817	-609	2.26	2.26	0
	49.9	40.33	40.29	-0.04	151407	150797	-610	2.23	2.23	0
	50.1	39.95	39.92	-0.03	151386	150777	-609	2.2	2.19	-0.01
	50.3	39.6	39.56	-0.04	151363	150754	-609	2.16	2.16	0
	50.5	39.26	39.23	-0.03	151340	150731	-609	2.12	2.12	0
	50.7	38.94	38.91	-0.03	151314	150706	-608	2.07	2.07	0
	50.9	38.64	38.61	-0.03	151288	150679	-609	2.03	2.02	-0.01
	51.1	38.37	38.33	-0.04	151260	150652	-608	1.98	1.98	0
	51.3	38.11	38.07	-0.04	151231	150623	-608	1.93	1.92	-0.01
	51.5	37.87	37.83	-0.04	151201	150593	-608	1.87	1.87	0
	51.705	37.67	37.64	-0.03	151170	150562	-608	1.88	1.88	0
	51.91	37.47	37.44	-0.03	151138	150531	-607	1.89	1.89	0
	52.115	37.27	37.23	-0.04	151106	150499	-607	1.9	1.89	-0.01
	52.32	37.06	37.02	-0.04	151074	150467	-607	1.9	1.9	0
	52.525	36.85	36.81	-0.04	151041	150434	-607	1.91	1.91	0
	52.73	36.63	36.6	-0.03	151007	150401	-606	1.92	1.92	0
	52.935	36.41	36.38	-0.03	150973	150367	-606	1.93	1.93	0
	53.14	36.19	36.15	-0.04	150938	150333	-605	1.94	1.94	0
	53.345	35.96	35.92	-0.04	150903	150298	-605	1.96	1.95	-0.01
	53.55	35.72	35.69	-0.03	150866	150262	-604	1.97	1.97	0
	53.755	35.48	35.45	-0.03	150829	150226	-603	1.98	1.98	0
	53.96	35.24	35.2	-0.04	150791	150188	-603	2	2	0
	54.165	34.98	34.95	-0.03	150753	150150	-603	2.02	2.01	-0.01

IDF (Qp = 154,500 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	54.37	34.73	34.69	-0.04	150712	150111	-601	2.04	2.03	-0.01
	54.575	34.46	34.43	-0.03	150671	150070	-601	2.06	2.05	-0.01
	54.78	34.19	34.16	-0.03	150629	150028	-601	2.08	2.08	0
	54.985	33.91	33.88	-0.03	150584	149985	-599	2.11	2.1	-0.01
	55.19	33.62	33.59	-0.03	150539	149940	-599	2.14	2.13	-0.01
	55.395	33.33	33.3	-0.03	150492	149894	-598	2.17	2.16	-0.01
	55.6	33.03	33	-0.03	150442	149846	-596	2.2	2.2	0
	55.809	32.69	32.66	-0.03	150389	149794	-595	2.17	2.17	0
	56.018	32.38	32.35	-0.03	150333	149739	-594	2.13	2.13	0
	56.227	32.09	32.06	-0.03	150274	149681	-593	2.09	2.09	0
	56.436	31.83	31.79	-0.04	150212	149620	-592	2.05	2.05	0
	56.645	31.58	31.55	-0.03	150147	149556	-591	2	2	0
	56.855	31.36	31.32	-0.04	150080	149491	-589	1.95	1.95	0
	57.064	31.15	31.12	-0.03	150011	149424	-587	1.9	1.89	-0.01
	57.273	30.96	30.93	-0.03	149944	149355	-586	1.85	1.84	-0.01
	57.482	30.79	30.76	-0.03	149870	149286	-584	1.79	1.79	0
	57.691	30.64	30.6	-0.04	149799	149216	-583	1.74	1.73	-0.01
	57.9	30.5	30.46	-0.04	149727	149146	-581	1.68	1.68	0
	58.1	30.35	30.31	-0.04	149658	149079	-579	1.69	1.68	-0.01
	58.3	30.19	30.16	-0.03	149589	149011	-578	1.69	1.68	-0.01
	58.5	30.04	30.01	-0.03	149519	148943	-576	1.69	1.68	-0.01
	58.7	29.89	29.86	-0.03	149449	148875	-574	1.69	1.68	-0.01
	58.9	29.75	29.71	-0.04	149379	148806	-573	1.68	1.68	0
	59.1	29.6	29.57	-0.03	149309	148738	-571	1.68	1.67	-0.01
	59.3	29.46	29.43	-0.03	149238	148669	-569	1.67	1.67	0
	59.5	29.32	29.29	-0.03	149168	148600	-568	1.67	1.66	-0.01
	59.7	29.19	29.15	-0.04	149098	148532	-566	1.66	1.65	-0.01
	59.9	29.06	29.02	-0.04	149028	148463	-565	1.65	1.64	-0.01
	60.1	28.93	28.89	-0.04	148958	148394	-564	1.63	1.62	-0.01
	60.3	28.81	28.77	-0.04	148888	148326	-562	1.62	1.61	-0.01
	60.5	28.69	28.65	-0.04	148819	148259	-560	1.6	1.59	-0.01
	60.7	28.57	28.54	-0.03	148750	148191	-559	1.58	1.57	-0.01
	60.9	28.47	28.43	-0.04	148682	148125	-557	1.56	1.55	-0.01
	61.1	28.36	28.33	-0.03	148615	148059	-556	1.54	1.53	-0.01
	61.3	28.26	28.23	-0.03	148548	147993	-555	1.51	1.5	-0.01
	61.5	28.17	28.13	-0.04	148482	147929	-553	1.49	1.48	-0.01
	61.7	28.08	28.04	-0.04	148417	147865	-552	1.46	1.45	-0.01
	61.9	27.94	27.91	-0.03	148353	147802	-551	1.45	1.44	-0.01
	62.1	27.81	27.77	-0.04	148287	147738	-549	1.44	1.43	-0.01
	62.3	27.67	27.64	-0.03	148221	147673	-548	1.43	1.42	-0.01
	62.5	27.54	27.5	-0.04	148154	147607	-547	1.42	1.41	-0.01
	62.7	27.4	27.37	-0.03	148087	147541	-546	1.41	1.39	-0.02
	62.9	27.27	27.23	-0.04	148019	147474	-545	1.39	1.38	-0.01
	63.1	27.13	27.1	-0.03	147950	147407	-543	1.38	1.37	-0.01
	63.3	27	26.96	-0.04	147880	147338	-542	1.36	1.35	-0.01
	63.5	26.86	26.83	-0.03	147810	147269	-541	1.35	1.34	-0.01
	63.7	26.73	26.7	-0.03	147739	147200	-539	1.33	1.32	-0.01
	63.9	26.6	26.57	-0.03	147668	147130	-538	1.32	1.3	-0.02
	64.1	26.48	26.44	-0.04	147595	147059	-536	1.3	1.29	-0.01
	64.3	26.36	26.32	-0.04	147523	146987	-536	1.28	1.27	-0.01
	64.5	26.24	26.2	-0.04	147450	146916	-534	1.26	1.25	-0.01
	64.7	26.12	26.09	-0.03	147377	146844	-533	1.24	1.23	-0.01
	64.9	26.04	26.01	-0.03	147306	146774	-532	1.24	1.23	-0.01
	65.1	25.96	25.93	-0.03	147237	146706	-531	1.25	1.23	-0.02
	65.3	25.88	25.85	-0.03	147170	146641	-529	1.25	1.23	-0.02
	65.5	25.8	25.77	-0.03	147106	146578	-528	1.25	1.23	-0.02
	65.7	25.71	25.68	-0.03	147044	146516	-528	1.25	1.24	-0.01
	65.9	25.63	25.6	-0.03	146984	146457	-527	1.26	1.24	-0.02
	66.1	25.54	25.51	-0.03	146925	146400	-525	1.26	1.24	-0.02
	66.3	25.45	25.42	-0.03	146869	146345	-524	1.26	1.25	-0.01
	66.5	25.36	25.33	-0.03	146815	146292	-523	1.27	1.25	-0.02
	66.7	25.27	25.24	-0.03	146762	146240	-522	1.27	1.26	-0.01
	66.9	25.17	25.14	-0.03	146712	146191	-521	1.28	1.26	-0.02
	67.1	25.08	25.04	-0.04	146662	146142	-520	1.29	1.27	-0.02
	67.3	24.97	24.94	-0.03	146614	146095	-519	1.29	1.28	-0.01
	67.5	24.87	24.84	-0.03	146568	146049	-519	1.3	1.28	-0.02
	67.7	24.76	24.73	-0.03	146522	146004	-518	1.31	1.29	-0.02
	67.9	24.66	24.63	-0.03	146478	145961	-517	1.32	1.3	-0.02
	68.1	24.56	24.53	-0.03	146436	145919	-517	1.32	1.31	-0.01

IDF (Qp = 154,500 cfs)

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	68.3	24.46	24.43	-0.03	146395	145879	-516	1.33	1.31	-0.02
	68.5	24.35	24.32	-0.03	146356	145841	-515	1.34	1.32	-0.02
	68.7	24.25	24.22	-0.03	146318	145804	-514	1.35	1.33	-0.02
	68.9	24.14	24.11	-0.03	146282	145768	-514	1.36	1.35	-0.01
	69.1	24.03	24	-0.03	146247	145735	-512	1.37	1.36	-0.01
	69.3	23.92	23.89	-0.03	146214	145702	-512	1.39	1.37	-0.02
	69.5	23.81	23.78	-0.03	146183	145672	-511	1.4	1.39	-0.01
	69.7	23.69	23.66	-0.03	146153	145642	-511	1.41	1.4	-0.01
	69.9	23.58	23.55	-0.03	146124	145614	-510	1.43	1.42	-0.01
	70.1	23.46	23.43	-0.03	146096	145586	-510	1.44	1.43	-0.01
	70.3	23.33	23.31	-0.02	146069	145560	-509	1.45	1.45	0
	70.5	23.21	23.18	-0.03	146043	145534	-509	1.47	1.47	0
	70.7	23.08	23.05	-0.03	146019	145510	-509	1.49	1.49	0
	70.905	22.84	22.81	-0.03	145993	145484	-509	1.46	1.46	0
	71.111	22.6	22.58	-0.02	145966	145458	-508	1.44	1.44	0
	71.317	22.37	22.34	-0.03	145938	145431	-507	1.42	1.42	0
	71.522	22.13	22.1	-0.03	145910	145402	-508	1.4	1.4	0
	71.728	21.88	21.86	-0.02	145880	145374	-506	1.38	1.38	0
	71.933	21.64	21.62	-0.02	145850	145344	-506	1.36	1.36	0
	72.139	21.4	21.37	-0.03	145820	145315	-505	1.35	1.35	0
	72.344	21.15	21.13	-0.02	145788	145284	-504	1.34	1.34	0
	72.55	20.91	20.88	-0.03	145757	145253	-504	1.32	1.32	0
	72.756	20.66	20.64	-0.02	145725	145222	-503	1.31	1.31	0
	72.961	20.41	20.38	-0.03	145692	145190	-502	1.31	1.3	-0.01
	73.167	20.16	20.13	-0.03	145660	145159	-501	1.3	1.3	0
	73.372	19.9	19.88	-0.02	145629	145128	-501	1.29	1.29	0
	73.578	19.66	19.63	-0.03	145598	145099	-499	1.28	1.28	0
	73.783	19.41	19.39	-0.02	145569	145071	-498	1.27	1.27	0
	73.989	19.16	19.14	-0.02	145541	145043	-498	1.27	1.27	0
	74.194	18.92	18.9	-0.02	145513	145017	-496	1.26	1.26	0
	74.4	18.67	18.65	-0.02	145487	144992	-495	1.26	1.25	-0.01

**500-Year Flood (Qp = 109,000 cfs) (Fuse plug breaches deeper)**

Assumption: Fuse plug breaches 4 feet deeper than designed.

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	74.32	74.41	0.09	122114	106374	-15740	4.31	3.62	-0.69
Tailwater	40.15	55.6	55.05	-0.55	122114	106374	-15740	1.74	1.44	-0.3
Crooked Rd.	40.5	54.88	54.38	-0.5	119565	106364	-13201	1.93	1.7	-0.23
	40.76	54.06	53.6	-0.46	119188	106357	-12831	2.17	1.96	-0.21
	40.97	53.21	52.78	-0.43	118892	106350	-12542	2.13	1.93	-0.2
	41.18	52.41	52	-0.41	118565	106342	-12223	2.09	1.89	-0.2
	41.39	51.66	51.25	-0.41	118197	106333	-11864	2.05	1.83	-0.22
	41.6	50.97	50.56	-0.41	117776	106321	-11455	2	1.77	-0.23
	41.81	50.34	49.94	-0.4	117289	106307	-10982	1.93	1.69	-0.24
	42.02	49.78	49.37	-0.41	116728	106291	-10437	1.85	1.61	-0.24
	42.23	49.29	48.88	-0.41	116092	106272	-9820	1.75	1.51	-0.24
	42.44	48.87	48.46	-0.41	115401	106252	-9149	1.63	1.41	-0.22
	42.65	48.53	48.11	-0.42	114696	106231	-8465	1.5	1.29	-0.21
	42.864	48.29	47.87	-0.42	114068	106209	-7859	1.54	1.34	-0.2
	43.077	48.04	47.63	-0.41	113620	106189	-7431	1.57	1.38	-0.19
	43.291	47.8	47.38	-0.42	113311	106171	-7140	1.59	1.42	-0.17
	43.505	47.56	47.15	-0.41	113086	106155	-6931	1.6	1.45	-0.15
	43.718	47.34	46.94	-0.4	112920	106141	-6779	1.61	1.48	-0.13
	43.932	47.12	46.73	-0.39	112789	106128	-6661	1.62	1.5	-0.12
	44.145	46.92	46.53	-0.39	112681	106116	-6565	1.64	1.52	-0.12
	44.359	46.71	46.33	-0.38	112590	106105	-6485	1.66	1.55	-0.11
	44.573	46.5	46.12	-0.38	112511	106094	-6417	1.69	1.59	-0.1
	44.786	46.27	45.9	-0.37	112441	106084	-6357	1.74	1.64	-0.1
	45	46.03	45.66	-0.37	112378	106074	-6304	1.8	1.7	-0.1
	45.207	45.84	45.47	-0.37	112324	106065	-6259	1.8	1.71	-0.09
	45.414	45.65	45.28	-0.37	112275	106057	-6218	1.8	1.72	-0.08
	45.621	45.45	45.09	-0.36	112230	106048	-6182	1.81	1.73	-0.08
	45.829	45.25	44.89	-0.36	112190	106040	-6150	1.82	1.75	-0.07
	46.036	45.05	44.69	-0.36	112154	106033	-6121	1.83	1.77	-0.06
	46.243	44.83	44.48	-0.35	112121	106026	-6095	1.85	1.79	-0.06
	46.45	44.61	44.26	-0.35	112090	106019	-6071	1.87	1.81	-0.06
	46.657	44.38	44.03	-0.35	112062	106013	-6049	1.89	1.84	-0.05
	46.864	44.13	43.78	-0.35	112036	106007	-6029	1.93	1.87	-0.06
	47.071	43.86	43.52	-0.34	112011	106001	-6010	1.96	1.91	-0.05
	47.279	43.57	43.24	-0.33	111988	105995	-5993	2.01	1.95	-0.06
	47.486	43.25	42.92	-0.33	111965	105990	-5975	2.06	2.01	-0.05
	47.693	42.89	42.57	-0.32	111943	105985	-5958	2.13	2.07	-0.06
	47.9	42.5	42.17	-0.33	111922	105980	-5942	2.21	2.15	-0.06
	48.1	42.03	41.71	-0.32	111900	105975	-5925	2.2	2.14	-0.06
	48.3	41.56	41.24	-0.32	111877	105969	-5908	2.2	2.14	-0.06
	48.5	41.09	40.77	-0.32	111852	105964	-5888	2.19	2.13	-0.06
	48.7	40.62	40.3	-0.32	111826	105957	-5869	2.18	2.12	-0.06
48.9	40.15	39.84	-0.31	111798	105950	-5848	2.17	2.11	-0.06	
49.1	39.7	39.38	-0.32	111768	105943	-5825	2.16	2.1	-0.06	
49.3	39.25	38.94	-0.31	111737	105936	-5801	2.15	2.08	-0.07	
49.5	38.82	38.51	-0.31	111705	105928	-5777	2.13	2.06	-0.07	
49.7	38.39	38.09	-0.3	111670	105919	-5751	2.11	2.04	-0.07	
49.9	37.99	37.68	-0.31	111635	105910	-5725	2.08	2.01	-0.07	
50.1	37.59	37.29	-0.3	111597	105900	-5697	2.06	1.98	-0.08	
50.3	37.21	36.91	-0.3	111559	105889	-5670	2.02	1.95	-0.07	
50.5	36.85	36.55	-0.3	111519	105877	-5642	1.99	1.91	-0.08	
50.7	36.52	36.21	-0.31	111478	105865	-5613	1.95	1.87	-0.08	
50.9	36.2	35.9	-0.3	111436	105852	-5584	1.9	1.82	-0.08	
51.1	35.9	35.6	-0.3	111394	105839	-5555	1.85	1.78	-0.07	
51.3	35.62	35.33	-0.29	111352	105824	-5528	1.8	1.73	-0.07	
51.5	35.37	35.07	-0.3	111310	105810	-5500	1.74	1.67	-0.07	
51.705	35.18	34.88	-0.3	111268	105795	-5473	1.75	1.68	-0.07	
51.91	34.98	34.69	-0.29	111228	105780	-5448	1.75	1.69	-0.06	
52.115	34.78	34.49	-0.29	111190	105764	-5426	1.76	1.7	-0.06	
52.32	34.57	34.29	-0.28	111152	105749	-5403	1.77	1.71	-0.06	
52.525	34.36	34.08	-0.28	111116	105734	-5382	1.78	1.72	-0.06	
52.73	34.14	33.86	-0.28	111081	105719	-5362	1.79	1.74	-0.05	
52.935	33.92	33.65	-0.27	111046	105703	-5343	1.81	1.75	-0.06	
53.14	33.7	33.42	-0.28	111011	105687	-5324	1.82	1.76	-0.06	
53.345	33.47	33.2	-0.27	110977	105672	-5305	1.84	1.78	-0.06	
53.55	33.23	32.96	-0.27	110944	105656	-5286	1.85	1.79	-0.06	
53.755	32.99	32.72	-0.27	110910	105639	-5271	1.87	1.81	-0.06	
53.96	32.74	32.48	-0.26	110876	105622	-5254	1.89	1.83	-0.06	

**500-Year Flood (Qp = 109,000 cfs) (Fuse plug breaches deeper)**  
 Assumption: Fuse plug breaches 4 feet deeper than designed.

City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	54.165	32.48	32.22	-0.26	110842	105605	-5237	1.91	1.85	-0.06
	54.37	32.22	31.96	-0.26	110807	105587	-5220	1.94	1.88	-0.06
	54.575	31.95	31.7	-0.25	110771	105568	-5203	1.97	1.9	-0.07
	54.78	31.67	31.42	-0.25	110734	105549	-5185	2	1.93	-0.07
	54.985	31.39	31.14	-0.25	110696	105529	-5167	2.03	1.96	-0.07
	55.19	31.1	30.86	-0.24	110657	105508	-5149	2.07	1.99	-0.08
	55.395	30.81	30.57	-0.24	110616	105485	-5131	2.11	2.03	-0.08
	55.6	30.51	30.27	-0.24	110573	105462	-5111	2.15	2.06	-0.09
	55.809	30.1	29.86	-0.24	110525	105435	-5090	2.13	2.04	-0.09
	56.018	29.72	29.47	-0.25	110472	105405	-5067	2.1	2	-0.1
	56.227	29.36	29.11	-0.25	110414	105372	-5042	2.07	1.97	-0.1
	56.436	29.03	28.77	-0.26	110350	105334	-5016	2.03	1.92	-0.11
	56.645	28.73	28.46	-0.27	110281	105293	-4988	1.99	1.88	-0.11
	56.855	28.45	28.18	-0.27	110207	105249	-4958	1.94	1.82	-0.12
	57.064	28.21	27.92	-0.29	110130	105201	-4929	1.89	1.77	-0.12
	57.273	27.98	27.7	-0.28	110050	105151	-4899	1.83	1.71	-0.12
	57.482	27.78	27.49	-0.29	109968	105098	-4870	1.77	1.65	-0.12
	57.691	27.61	27.31	-0.3	109884	105043	-4841	1.7	1.59	-0.11
	57.9	27.45	27.15	-0.3	109799	104987	-4812	1.64	1.53	-0.11
	58.1	27.28	26.98	-0.3	109717	104932	-4785	1.64	1.54	-0.1
	58.3	27.11	26.81	-0.3	109633	104875	-4758	1.65	1.54	-0.11
	58.5	26.94	26.64	-0.3	109548	104816	-4732	1.65	1.54	-0.11
	58.7	26.78	26.47	-0.31	109462	104755	-4707	1.66	1.55	-0.11
	58.9	26.61	26.3	-0.31	109374	104693	-4681	1.66	1.54	-0.12
	59.1	26.45	26.14	-0.31	109285	104629	-4656	1.65	1.54	-0.11
	59.3	26.3	25.98	-0.32	109193	104563	-4630	1.65	1.54	-0.11
	59.5	26.14	25.82	-0.32	109099	104495	-4604	1.64	1.53	-0.11
	59.7	25.99	25.67	-0.32	109003	104426	-4577	1.63	1.52	-0.11
	59.9	25.85	25.53	-0.32	108904	104356	-4548	1.62	1.51	-0.11
	60.1	25.72	25.39	-0.33	108803	104284	-4519	1.61	1.49	-0.12
	60.3	25.58	25.25	-0.33	108700	104211	-4489	1.59	1.48	-0.11
	60.5	25.46	25.12	-0.34	108595	104137	-4458	1.57	1.46	-0.11
	60.7	25.34	25	-0.34	108489	104063	-4426	1.54	1.44	-0.1
	60.9	25.23	24.89	-0.34	108381	103988	-4393	1.51	1.41	-0.1
	61.1	25.12	24.78	-0.34	108271	103912	-4359	1.48	1.39	-0.09
	61.3	25.02	24.68	-0.34	108162	103837	-4325	1.45	1.36	-0.09
	61.5	24.93	24.59	-0.34	108052	103762	-4290	1.42	1.34	-0.08
	61.7	24.84	24.51	-0.33	107942	103688	-4254	1.39	1.31	-0.08
	61.9	24.71	24.37	-0.34	107831	103613	-4218	1.38	1.3	-0.08
	62.1	24.58	24.24	-0.34	107716	103537	-4179	1.38	1.29	-0.09
	62.3	24.44	24.11	-0.33	107596	103458	-4138	1.37	1.29	-0.08
	62.5	24.31	23.97	-0.34	107473	103378	-4095	1.36	1.28	-0.08
	62.7	24.17	23.83	-0.34	107346	103295	-4051	1.35	1.27	-0.08
	62.9	24.04	23.7	-0.34	107218	103211	-4007	1.34	1.26	-0.08
	63.1	23.91	23.56	-0.35	107094	103125	-3969	1.33	1.25	-0.08
	63.3	23.77	23.43	-0.34	106973	103037	-3936	1.32	1.24	-0.08
	63.5	23.64	23.3	-0.34	106852	102947	-3905	1.31	1.22	-0.09
	63.7	23.51	23.16	-0.35	106735	102855	-3880	1.3	1.21	-0.09
	63.9	23.38	23.03	-0.35	106618	102761	-3857	1.28	1.2	-0.08
	64.1	23.25	22.9	-0.35	106502	102666	-3836	1.27	1.18	-0.09
	64.3	23.12	22.77	-0.35	106387	102568	-3819	1.25	1.17	-0.08
	64.5	22.99	22.64	-0.35	106273	102470	-3803	1.24	1.15	-0.09
	64.7	22.87	22.52	-0.35	106160	102370	-3790	1.22	1.13	-0.09
	64.9	22.79	22.43	-0.36	106051	102270	-3781	1.22	1.13	-0.09
	65.1	22.71	22.35	-0.36	105947	102174	-3773	1.22	1.14	-0.08
	65.3	22.63	22.27	-0.36	105848	102081	-3767	1.22	1.14	-0.08
	65.5	22.55	22.19	-0.36	105753	101992	-3761	1.22	1.14	-0.08
	65.7	22.46	22.11	-0.35	105663	101905	-3758	1.22	1.14	-0.08
	65.9	22.38	22.02	-0.36	105577	101821	-3756	1.22	1.15	-0.07
	66.1	22.3	21.94	-0.36	105496	101740	-3756	1.22	1.15	-0.07
	66.3	22.22	21.86	-0.36	105418	101663	-3755	1.23	1.16	-0.07
	66.5	22.13	21.77	-0.36	105344	101588	-3756	1.23	1.16	-0.07
	66.7	22.05	21.69	-0.36	105273	101517	-3756	1.23	1.17	-0.06
	66.9	21.96	21.6	-0.36	105205	101448	-3757	1.24	1.17	-0.07
	67.1	21.87	21.52	-0.35	105141	101382	-3759	1.24	1.18	-0.06
	67.3	21.78	21.43	-0.35	105079	101319	-3760	1.25	1.19	-0.06
	67.5	21.69	21.34	-0.35	105020	101258	-3762	1.26	1.19	-0.07
	67.7	21.6	21.24	-0.36	104963	101201	-3762	1.27	1.2	-0.07

**500-Year Flood (Qp = 109,000 cfs) (Fuse plug breaches deeper)**  
 Assumption: Fuse plug breaches 4 feet deeper than designed.

City of Tallahassee  
 C. H. Corn Hydro Facility  
 Attachment 2

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	67.9	21.51	21.16	-0.35	104909	101145	-3764	1.27	1.21	-0.06
	68.1	21.43	21.08	-0.35	104858	101092	-3766	1.28	1.22	-0.06
	68.3	21.34	20.99	-0.35	104808	101042	-3766	1.29	1.23	-0.06
	68.5	21.26	20.91	-0.35	104762	100994	-3768	1.3	1.24	-0.06
	68.7	21.17	20.82	-0.35	104717	100949	-3768	1.31	1.25	-0.06
	68.9	21.08	20.73	-0.35	104674	100905	-3769	1.32	1.26	-0.06
	69.1	20.99	20.64	-0.35	104633	100864	-3769	1.33	1.27	-0.06
	69.3	20.89	20.55	-0.34	104594	100825	-3769	1.35	1.28	-0.07
	69.5	20.8	20.46	-0.34	104557	100787	-3770	1.36	1.3	-0.06
	69.7	20.7	20.36	-0.34	104522	100752	-3770	1.37	1.31	-0.06
	69.9	20.6	20.26	-0.34	104488	100719	-3769	1.39	1.32	-0.07
	70.1	20.49	20.16	-0.33	104457	100688	-3769	1.4	1.33	-0.07
	70.3	20.38	20.05	-0.33	104427	100660	-3767	1.41	1.34	-0.07
	70.5	20.28	19.95	-0.33	104400	100634	-3766	1.42	1.35	-0.07
	70.7	20.17	19.85	-0.32	104376	100612	-3764	1.43	1.36	-0.07
	70.905	19.98	19.68	-0.3	104353	100590	-3763	1.41	1.34	-0.07
	71.111	19.8	19.51	-0.29	104330	100570	-3760	1.39	1.32	-0.07
	71.317	19.61	19.34	-0.27	104309	100551	-3758	1.37	1.3	-0.07
	71.522	19.43	19.17	-0.26	104289	100533	-3756	1.35	1.28	-0.07
	71.728	19.25	18.99	-0.26	104270	100516	-3754	1.33	1.26	-0.07
	71.933	19.07	18.82	-0.25	104251	100500	-3751	1.31	1.25	-0.06
	72.139	18.89	18.65	-0.24	104234	100485	-3749	1.29	1.23	-0.06
	72.344	18.71	18.48	-0.23	104218	100472	-3746	1.27	1.21	-0.06
	72.55	18.53	18.31	-0.22	104202	100459	-3743	1.25	1.2	-0.05
	72.756	18.35	18.15	-0.2	104188	100448	-3740	1.24	1.18	-0.06
	72.961	18.17	17.98	-0.19	104174	100437	-3737	1.22	1.16	-0.06
	73.167	18	17.81	-0.19	104161	100428	-3733	1.2	1.15	-0.05
	73.372	17.82	17.64	-0.18	104149	100420	-3729	1.18	1.13	-0.05
	73.578	17.64	17.47	-0.17	104138	100412	-3726	1.17	1.12	-0.05
	73.783	17.47	17.3	-0.17	104128	100406	-3722	1.15	1.1	-0.05
	73.989	17.29	17.14	-0.15	104118	100401	-3717	1.14	1.09	-0.05
	74.194	17.12	16.97	-0.15	104109	100396	-3713	1.12	1.08	-0.04
	74.4	16.94	16.81	-0.13	104101	100393	-3708	1.1	1.06	-0.04

**500-Year Flood (Qp = 109,000 cfs) (Emergency spillway breaches)**

**Breach assumptions:**

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	72.31	74.41	2.1	107465	106374	-1091	4.24	3.62	-0.62
Tailwater	40.15	55.06	55.05	-0.01	107465	106374	-1091	1.69	1.44	-0.25
	40.5	54.39	54.38	-0.01	106583	106364	-219	1.84	1.7	-0.14
Crooked Rd.	40.76	53.61	53.6	-0.01	106580	106357	-223	2.08	1.96	-0.12
	40.97	52.8	52.78	-0.02	106577	106350	-227	2.05	1.93	-0.12
	41.18	52.02	52	-0.02	106574	106342	-232	2.02	1.89	-0.13
	41.39	51.28	51.25	-0.03	106570	106333	-237	1.98	1.83	-0.15
	41.6	50.59	50.56	-0.03	106565	106321	-244	1.94	1.77	-0.17
	41.81	49.96	49.94	-0.02	106559	106307	-252	1.89	1.69	-0.2
	42.02	49.4	49.37	-0.03	106552	106291	-261	1.82	1.61	-0.21
	42.23	48.91	48.88	-0.03	106544	106272	-272	1.73	1.51	-0.22
	42.44	48.49	48.46	-0.03	106536	106252	-284	1.62	1.41	-0.21
	42.65	48.14	48.11	-0.03	106526	106231	-295	1.49	1.29	-0.2
	42.864	47.9	47.87	-0.03	106517	106209	-308	1.52	1.34	-0.18
	43.077	47.66	47.63	-0.03	106508	106189	-319	1.54	1.38	-0.16
	43.291	47.42	47.38	-0.04	106500	106171	-329	1.55	1.42	-0.13
	43.505	47.18	47.15	-0.03	106494	106155	-339	1.55	1.45	-0.1
	43.718	46.97	46.94	-0.03	106488	106141	-347	1.55	1.48	-0.07
	43.932	46.76	46.73	-0.03	106482	106128	-354	1.56	1.5	-0.06
	44.145	46.56	46.53	-0.03	106477	106116	-361	1.57	1.52	-0.05
	44.359	46.36	46.33	-0.03	106472	106105	-367	1.59	1.55	-0.04
	44.573	46.15	46.12	-0.03	106467	106094	-373	1.62	1.59	-0.03
	44.786	45.93	45.9	-0.03	106463	106084	-379	1.67	1.64	-0.03
	45	45.69	45.66	-0.03	106458	106074	-384	1.74	1.7	-0.04
	45.207	45.5	45.47	-0.03	106454	106065	-389	1.73	1.71	-0.02
	45.414	45.31	45.28	-0.03	106450	106057	-393	1.74	1.72	-0.02
	45.621	45.12	45.09	-0.03	106447	106048	-399	1.74	1.73	-0.01
	45.829	44.92	44.89	-0.03	106443	106040	-403	1.75	1.75	0
	46.036	44.72	44.69	-0.03	106440	106033	-407	1.77	1.77	0
	46.243	44.51	44.48	-0.03	106436	106026	-410	1.79	1.79	0
	46.45	44.29	44.26	-0.03	106433	106019	-414	1.81	1.81	0
	46.657	44.06	44.03	-0.03	106431	106013	-418	1.84	1.84	0
	46.864	43.81	43.78	-0.03	106428	106007	-421	1.87	1.87	0
	47.071	43.55	43.52	-0.03	106425	106001	-424	1.91	1.91	0
	47.279	43.26	43.24	-0.02	106422	105995	-427	1.96	1.95	-0.01
	47.486	42.95	42.92	-0.03	106420	105990	-430	2.01	2.01	0
	47.693	42.6	42.57	-0.03	106418	105985	-433	2.07	2.07	0
	47.9	42.2	42.17	-0.03	106415	105980	-435	2.15	2.15	0
	48.1	41.74	41.71	-0.03	106413	105975	-438	2.15	2.14	-0.01
	48.3	41.27	41.24	-0.03	106410	105969	-441	2.14	2.14	0
	48.5	40.8	40.77	-0.03	106408	105964	-444	2.13	2.13	0
	48.7	40.33	40.3	-0.03	106405	105957	-448	2.12	2.12	0
	48.9	39.87	39.84	-0.03	106401	105950	-451	2.11	2.11	0
	49.1	39.42	39.38	-0.04	106398	105943	-455	2.1	2.1	0
	49.3	38.98	38.94	-0.04	106394	105936	-458	2.08	2.08	0
	49.5	38.55	38.51	-0.04	106390	105928	-462	2.06	2.06	0
	49.7	38.13	38.09	-0.04	106386	105919	-467	2.04	2.04	0
	49.9	37.72	37.68	-0.04	106382	105910	-472	2.01	2.01	0
	50.1	37.33	37.29	-0.04	106376	105900	-476	1.98	1.98	0
	50.3	36.95	36.91	-0.04	106371	105889	-482	1.95	1.95	0
	50.5	36.6	36.55	-0.05	106365	105877	-488	1.92	1.91	-0.01
	50.7	36.26	36.21	-0.05	106359	105865	-494	1.88	1.87	-0.01
	50.9	35.94	35.9	-0.04	106352	105852	-500	1.83	1.82	-0.01
	51.1	35.65	35.6	-0.05	106345	105839	-506	1.78	1.78	0
	51.3	35.38	35.33	-0.05	106338	105824	-514	1.73	1.73	0
	51.5	35.12	35.07	-0.05	106330	105810	-520	1.67	1.67	0
	51.705	34.93	34.88	-0.05	106322	105795	-527	1.68	1.68	0
	51.91	34.74	34.69	-0.05	106313	105780	-533	1.69	1.69	0
	52.115	34.54	34.49	-0.05	106305	105764	-541	1.7	1.7	0
	52.32	34.34	34.29	-0.05	106296	105749	-547	1.71	1.71	0
	52.525	34.13	34.08	-0.05	106287	105734	-553	1.72	1.72	0
	52.73	33.92	33.86	-0.06	106278	105719	-559	1.73	1.74	0.01
	52.935	33.7	33.65	-0.05	106269	105703	-566	1.75	1.75	0

**500-Year Flood (Qp = 109,000 cfs) (Emergency spillway breaches)**

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	53.14	33.48	33.42	-0.06	106260	105687	-573	1.76	1.76	0
	53.345	33.26	33.2	-0.06	106250	105672	-578	1.78	1.78	0
	53.55	33.02	32.96	-0.06	106240	105656	-584	1.79	1.79	0
	53.755	32.79	32.72	-0.07	106230	105639	-591	1.81	1.81	0
	53.96	32.54	32.48	-0.06	106219	105622	-597	1.83	1.83	0
	54.165	32.29	32.22	-0.07	106208	105605	-603	1.86	1.85	-0.01
	54.37	32.03	31.96	-0.07	106196	105587	-609	1.88	1.88	0
	54.575	31.77	31.7	-0.07	106184	105568	-616	1.91	1.9	-0.01
	54.78	31.5	31.42	-0.08	106171	105549	-622	1.94	1.93	-0.01
	54.985	31.22	31.14	-0.08	106158	105529	-629	1.98	1.96	-0.02
	55.19	30.94	30.86	-0.08	106143	105508	-635	2.01	1.99	-0.02
	55.395	30.65	30.57	-0.08	106128	105485	-643	2.05	2.03	-0.02
	55.6	30.36	30.27	-0.09	106112	105462	-650	2.1	2.06	-0.04
	55.809	29.96	29.86	-0.1	106094	105435	-659	2.08	2.04	-0.04
	56.018	29.57	29.47	-0.1	106073	105405	-668	2.05	2	-0.05
	56.227	29.22	29.11	-0.11	106050	105372	-678	2.03	1.97	-0.06
	56.436	28.89	28.77	-0.12	106024	105334	-690	1.99	1.92	-0.07
	56.645	28.59	28.46	-0.13	105996	105293	-703	1.95	1.88	-0.07
	56.855	28.31	28.18	-0.13	105966	105249	-717	1.91	1.82	-0.09
	57.064	28.07	27.92	-0.15	105933	105201	-732	1.85	1.77	-0.08
	57.273	27.84	27.7	-0.14	105899	105151	-748	1.8	1.71	-0.09
	57.482	27.65	27.49	-0.16	105863	105098	-765	1.73	1.65	-0.08
	57.691	27.47	27.31	-0.16	105825	105043	-782	1.66	1.59	-0.07
	57.9	27.31	27.15	-0.16	105787	104987	-800	1.6	1.53	-0.07
	58.1	27.15	26.98	-0.17	105750	104932	-818	1.61	1.54	-0.07
	58.3	26.98	26.81	-0.17	105711	104875	-836	1.61	1.54	-0.07
	58.5	26.81	26.64	-0.17	105672	104816	-856	1.62	1.54	-0.08
	58.7	26.65	26.47	-0.18	105631	104755	-876	1.62	1.55	-0.07
	58.9	26.48	26.3	-0.18	105590	104693	-897	1.63	1.54	-0.09
	59.1	26.32	26.14	-0.18	105547	104629	-918	1.63	1.54	-0.09
	59.3	26.17	25.98	-0.19	105504	104563	-941	1.63	1.54	-0.09
	59.5	26.02	25.82	-0.2	105460	104495	-965	1.62	1.53	-0.09
	59.7	25.87	25.67	-0.2	105415	104426	-989	1.61	1.52	-0.09
	59.9	25.73	25.53	-0.2	105370	104356	-1014	1.6	1.51	-0.09
	60.1	25.59	25.39	-0.2	105324	104284	-1040	1.58	1.49	-0.09
	60.3	25.46	25.25	-0.21	105278	104211	-1067	1.56	1.48	-0.08
	60.5	25.33	25.12	-0.21	105231	104137	-1094	1.54	1.46	-0.08
	60.7	25.22	25	-0.22	105184	104063	-1121	1.51	1.44	-0.07
	60.9	25.1	24.89	-0.21	105137	103988	-1149	1.48	1.41	-0.07
	61.1	25	24.78	-0.22	105090	103912	-1178	1.45	1.39	-0.06
	61.3	24.9	24.68	-0.22	105043	103837	-1206	1.41	1.36	-0.05
	61.5	24.81	24.59	-0.22	104996	103762	-1234	1.38	1.34	-0.04
	61.7	24.72	24.51	-0.21	104950	103688	-1262	1.35	1.31	-0.04
	61.9	24.59	24.37	-0.22	104904	103613	-1291	1.34	1.3	-0.04
	62.1	24.46	24.24	-0.22	104856	103537	-1319	1.34	1.29	-0.05
	62.3	24.33	24.11	-0.22	104808	103458	-1350	1.33	1.29	-0.04
	62.5	24.19	23.97	-0.22	104758	103378	-1380	1.32	1.28	-0.04
	62.7	24.06	23.83	-0.23	104708	103295	-1413	1.32	1.27	-0.05
	62.9	23.92	23.7	-0.22	104656	103211	-1445	1.31	1.26	-0.05
	63.1	23.79	23.56	-0.23	104604	103125	-1479	1.3	1.25	-0.05
	63.3	23.66	23.43	-0.23	104551	103037	-1514	1.29	1.24	-0.05
	63.5	23.53	23.3	-0.23	104496	102947	-1549	1.28	1.22	-0.06
	63.7	23.39	23.16	-0.23	104441	102855	-1586	1.27	1.21	-0.06
	63.9	23.26	23.03	-0.23	104384	102761	-1623	1.26	1.2	-0.06
	64.1	23.13	22.9	-0.23	104327	102666	-1661	1.25	1.18	-0.07
	64.3	23	22.77	-0.23	104269	102568	-1701	1.23	1.17	-0.06
	64.5	22.88	22.64	-0.24	104210	102470	-1740	1.22	1.15	-0.07
	64.7	22.76	22.52	-0.24	104150	102370	-1780	1.2	1.13	-0.07
	64.9	22.68	22.43	-0.25	104090	102270	-1820	1.2	1.13	-0.07
	65.1	22.59	22.35	-0.24	104033	102174	-1859	1.2	1.14	-0.06
	65.3	22.51	22.27	-0.24	103977	102081	-1896	1.2	1.14	-0.06
	65.5	22.43	22.19	-0.24	103923	101992	-1931	1.2	1.14	-0.06
	65.7	22.35	22.11	-0.24	103871	101905	-1966	1.2	1.14	-0.06

**500-Year Flood (Qp = 109,000 cfs) (Emergency spillway breaches)**

Breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	65.9	22.27	22.02	-0.25	103820	101821	-1999	1.2	1.15	-0.05
	66.1	22.19	21.94	-0.25	103772	101740	-2032	1.2	1.15	-0.05
	66.3	22.1	21.86	-0.24	103725	101663	-2062	1.2	1.16	-0.04
	66.5	22.02	21.77	-0.25	103680	101588	-2092	1.21	1.16	-0.05
	66.7	21.93	21.69	-0.24	103637	101517	-2120	1.21	1.17	-0.04
	66.9	21.85	21.6	-0.25	103595	101448	-2147	1.21	1.17	-0.04
	67.1	21.76	21.52	-0.24	103555	101382	-2173	1.22	1.18	-0.04
	67.3	21.67	21.43	-0.24	103516	101319	-2197	1.22	1.19	-0.03
	67.5	21.58	21.34	-0.24	103479	101258	-2221	1.23	1.19	-0.04
	67.7	21.49	21.24	-0.25	103444	101201	-2243	1.24	1.2	-0.04
	67.9	21.4	21.16	-0.24	103409	101145	-2264	1.24	1.21	-0.03
	68.1	21.32	21.08	-0.24	103377	101092	-2285	1.25	1.22	-0.03
	68.3	21.23	20.99	-0.24	103345	101042	-2303	1.26	1.23	-0.03
	68.5	21.15	20.91	-0.24	103315	100994	-2321	1.27	1.24	-0.03
	68.7	21.06	20.82	-0.24	103286	100949	-2337	1.28	1.25	-0.03
	68.9	20.97	20.73	-0.24	103259	100905	-2354	1.29	1.26	-0.03
	69.1	20.88	20.64	-0.24	103233	100864	-2369	1.31	1.27	-0.04
	69.3	20.79	20.55	-0.24	103207	100825	-2382	1.32	1.28	-0.04
	69.5	20.69	20.46	-0.23	103183	100787	-2396	1.33	1.3	-0.03
	69.7	20.59	20.36	-0.23	103161	100752	-2409	1.34	1.31	-0.03
	69.9	20.49	20.26	-0.23	103139	100719	-2420	1.36	1.32	-0.04
	70.1	20.39	20.16	-0.23	103119	100688	-2431	1.37	1.33	-0.04
	70.3	20.28	20.05	-0.23	103100	100660	-2440	1.38	1.34	-0.04
	70.5	20.18	19.95	-0.23	103083	100634	-2449	1.39	1.35	-0.04
	70.7	20.07	19.85	-0.22	103067	100612	-2455	1.4	1.36	-0.04
	70.905	19.89	19.68	-0.21	103053	100590	-2463	1.38	1.34	-0.04
	71.111	19.71	19.51	-0.2	103039	100570	-2469	1.36	1.32	-0.04
	71.317	19.53	19.34	-0.19	103026	100551	-2475	1.34	1.3	-0.04
	71.522	19.35	19.17	-0.18	103013	100533	-2480	1.32	1.28	-0.04
	71.728	19.17	18.99	-0.18	103002	100516	-2486	1.3	1.26	-0.04
	71.933	19	18.82	-0.18	102991	100500	-2491	1.29	1.25	-0.04
	72.139	18.82	18.65	-0.17	102981	100485	-2496	1.27	1.23	-0.04
	72.344	18.64	18.48	-0.16	102971	100472	-2499	1.25	1.21	-0.04
	72.55	18.47	18.31	-0.16	102962	100459	-2503	1.24	1.2	-0.04
	72.756	18.29	18.15	-0.14	102954	100448	-2506	1.22	1.18	-0.04
	72.961	18.12	17.98	-0.14	102947	100437	-2510	1.2	1.16	-0.04
	73.167	17.94	17.81	-0.13	102940	100428	-2512	1.19	1.15	-0.04
	73.372	17.77	17.64	-0.13	102934	100420	-2514	1.17	1.13	-0.04
	73.578	17.59	17.47	-0.12	102929	100412	-2517	1.16	1.12	-0.04
	73.783	17.42	17.3	-0.12	102924	100406	-2518	1.14	1.1	-0.04
	73.989	17.25	17.14	-0.11	102920	100401	-2519	1.13	1.09	-0.04
	74.194	17.08	16.97	-0.11	102917	100396	-2521	1.11	1.08	-0.03
	74.4	16.91	16.81	-0.1	102914	100393	-2521	1.1	1.06	-0.04

**Qp = 68,000 cfs (the flood which just overtops and fails the existing emergency spillway)**

**Breach assumptions:**

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	72.3	71.35	-0.95	106514	65026	-41488	4.23	2.6	-1.63
Tailwater	40.15	54.69	52.47	-2.22	106514	65026	-41488	1.67	1.13	-0.54
	40.5	54	51.9	-2.1	103190	65022	-38168	1.83	1.38	-0.45
Crooked Rd.	40.76	53.17	51.12	-2.05	102713	65019	-37694	2.07	1.66	-0.41
	40.97	52.28	50.24	-2.04	102367	65016	-37351	2.03	1.64	-0.39
	41.18	51.42	49.37	-2.05	102012	65013	-36999	2	1.62	-0.38
	41.39	50.59	48.53	-2.06	101630	65009	-36621	1.96	1.6	-0.36
	41.6	49.81	47.72	-2.09	101194	65005	-36189	1.92	1.56	-0.36
	41.81	49.1	46.97	-2.13	100693	64998	-35695	1.86	1.51	-0.35
	42.02	48.48	46.29	-2.19	100116	64990	-35126	1.79	1.45	-0.34
	42.23	47.94	45.7	-2.24	99463	64981	-34482	1.7	1.36	-0.34
	42.44	47.49	45.21	-2.28	98741	64969	-33772	1.59	1.27	-0.32
	42.65	47.11	44.8	-2.31	97960	64956	-33004	1.46	1.17	-0.29
	42.864	46.86	44.55	-2.31	97192	64943	-32249	1.49	1.19	-0.3
	43.077	46.61	44.31	-2.3	96526	64932	-31594	1.51	1.21	-0.3
	43.291	46.37	44.1	-2.27	95956	64921	-31035	1.52	1.22	-0.3
	43.505	46.14	43.91	-2.23	95464	64911	-30553	1.52	1.22	-0.3
	43.718	45.94	43.73	-2.21	95034	64902	-30132	1.53	1.23	-0.3
	43.932	45.74	43.56	-2.18	94652	64894	-29758	1.53	1.24	-0.29
	44.145	45.54	43.39	-2.15	94313	64886	-29427	1.55	1.25	-0.3
	44.359	45.35	43.22	-2.13	94011	64879	-29132	1.57	1.28	-0.29
	44.573	45.15	43.04	-2.11	93745	64872	-28873	1.6	1.31	-0.29
	44.786	44.93	42.84	-2.09	93508	64865	-28643	1.64	1.36	-0.28
	45	44.7	42.62	-2.08	93294	64859	-28435	1.71	1.43	-0.28
	45.207	44.51	42.43	-2.08	93107	64852	-28255	1.71	1.43	-0.28
	45.414	44.32	42.24	-2.08	92939	64847	-28092	1.71	1.44	-0.27
	45.621	44.13	42.05	-2.08	92788	64841	-27947	1.71	1.45	-0.26
	45.829	43.93	41.85	-2.08	92653	64836	-27817	1.72	1.46	-0.26
	46.036	43.73	41.65	-2.08	92531	64831	-27700	1.73	1.48	-0.25
	46.243	43.52	41.45	-2.07	92423	64826	-27597	1.74	1.5	-0.24
	46.45	43.31	41.24	-2.07	92324	64822	-27502	1.76	1.52	-0.24
	46.657	43.08	41.02	-2.06	92235	64817	-27418	1.77	1.54	-0.23
	46.864	42.84	40.79	-2.05	92154	64814	-27340	1.8	1.58	-0.22
	47.071	42.59	40.54	-2.05	92080	64810	-27270	1.83	1.61	-0.22
	47.279	42.31	40.28	-2.03	92013	64806	-27207	1.87	1.65	-0.22
	47.486	42.01	39.99	-2.02	91951	64803	-27148	1.92	1.71	-0.21
	47.693	41.66	39.68	-1.98	91893	64800	-27093	1.99	1.77	-0.22
	47.9	41.26	39.33	-1.93	91837	64798	-27039	2.07	1.85	-0.22
	48.1	40.78	38.92	-1.86	91782	64795	-26987	2.07	1.84	-0.23
	48.3	40.3	38.49	-1.81	91726	64793	-26933	2.07	1.83	-0.24
	48.5	39.82	38.05	-1.77	91668	64790	-26878	2.06	1.82	-0.24
	48.7	39.35	37.61	-1.74	91609	64788	-26821	2.06	1.81	-0.25
	48.9	38.89	37.17	-1.72	91548	64785	-26763	2.05	1.8	-0.25
	49.1	38.43	36.73	-1.7	91485	64782	-26703	2.03	1.78	-0.25
	49.3	37.98	36.29	-1.69	91419	64779	-26640	2.02	1.77	-0.25
	49.5	37.54	35.86	-1.68	91349	64776	-26573	2	1.76	-0.24
	49.7	37.11	35.44	-1.67	91275	64773	-26502	1.98	1.74	-0.24
	49.9	36.69	35.02	-1.67	91196	64770	-26426	1.96	1.72	-0.24
	50.1	36.28	34.61	-1.67	91112	64766	-26346	1.93	1.69	-0.24
	50.3	35.89	34.22	-1.67	91024	64761	-26263	1.9	1.66	-0.24
	50.5	35.52	33.85	-1.67	90931	64757	-26174	1.87	1.63	-0.24
	50.7	35.17	33.49	-1.68	90833	64752	-26081	1.83	1.59	-0.24
	50.9	34.84	33.16	-1.68	90733	64747	-25986	1.78	1.55	-0.23
	51.1	34.53	32.85	-1.68	90628	64741	-25887	1.73	1.5	-0.23
	51.3	34.24	32.57	-1.67	90523	64736	-25787	1.68	1.45	-0.23
	51.5	33.99	32.32	-1.67	90417	64730	-25687	1.62	1.4	-0.22
	51.705	33.8	32.15	-1.65	90311	64724	-25587	1.63	1.41	-0.22
	51.91	33.6	31.97	-1.63	90208	64718	-25490	1.64	1.42	-0.22
	52.115	33.4	31.79	-1.61	90108	64712	-25396	1.65	1.43	-0.22
	52.32	33.2	31.6	-1.6	90011	64706	-25305	1.66	1.44	-0.22
	52.525	32.99	31.41	-1.58	89918	64701	-25217	1.67	1.45	-0.22
	52.73	32.78	31.21	-1.57	89827	64696	-25131	1.68	1.46	-0.22
	52.935	32.56	31.01	-1.55	89738	64690	-25048	1.69	1.48	-0.21

**Qp = 68,000 cfs (the flood which just overtops and falls the existing emergency spillway)**

Breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	53.14	32.34	30.8	-1.54	89652	64685	-24967	1.7	1.5	-0.2
	53.345	32.11	30.59	-1.52	89568	64680	-24888	1.72	1.51	-0.21
	53.55	31.87	30.37	-1.5	89485	64676	-24809	1.74	1.53	-0.21
	53.755	31.63	30.14	-1.49	89405	64671	-24734	1.75	1.55	-0.2
	53.96	31.38	29.91	-1.47	89326	64666	-24660	1.78	1.57	-0.21
	54.165	31.13	29.67	-1.46	89249	64662	-24587	1.8	1.6	-0.2
	54.37	30.86	29.43	-1.43	89174	64657	-24517	1.82	1.62	-0.2
	54.575	30.59	29.17	-1.42	89099	64652	-24447	1.85	1.65	-0.2
	54.78	30.31	28.92	-1.39	89026	64648	-24378	1.88	1.68	-0.2
	54.985	30.03	28.65	-1.38	88953	64643	-24310	1.92	1.71	-0.21
	55.19	29.73	28.37	-1.36	88881	64639	-24242	1.95	1.75	-0.2
	55.395	29.44	28.08	-1.36	88809	64634	-24175	1.99	1.8	-0.19
	55.6	29.13	27.76	-1.37	88736	64629	-24107	2.04	1.85	-0.19
	55.809	28.66	27.27	-1.39	88657	64623	-24034	2.02	1.83	-0.19
	56.018	28.2	26.8	-1.4	88568	64616	-23952	1.99	1.81	-0.18
	56.227	27.76	26.34	-1.42	88469	64607	-23862	1.97	1.78	-0.19
	56.436	27.35	25.9	-1.45	88358	64598	-23760	1.93	1.75	-0.18
	56.645	26.96	25.49	-1.47	88236	64586	-23650	1.89	1.71	-0.18
	56.855	26.61	25.1	-1.51	88102	64573	-23529	1.84	1.66	-0.18
	57.064	26.29	24.76	-1.53	87958	64558	-23400	1.79	1.61	-0.18
	57.273	26.01	24.45	-1.56	87806	64541	-23265	1.73	1.55	-0.18
	57.482	25.75	24.18	-1.57	87647	64523	-23124	1.66	1.48	-0.18
	57.691	25.53	23.95	-1.58	87483	64504	-22979	1.6	1.42	-0.18
	57.9	25.34	23.75	-1.59	87316	64483	-22833	1.53	1.35	-0.18
	58.1	25.13	23.54	-1.59	87155	64463	-22692	1.54	1.36	-0.18
	58.3	24.92	23.32	-1.6	86991	64441	-22550	1.54	1.37	-0.17
	58.5	24.71	23.11	-1.6	86824	64419	-22405	1.55	1.38	-0.17
	58.7	24.5	22.89	-1.61	86654	64396	-22258	1.55	1.4	-0.15
	58.9	24.29	22.67	-1.62	86480	64371	-22109	1.55	1.41	-0.14
	59.1	24.08	22.46	-1.62	86303	64345	-21958	1.55	1.41	-0.14
	59.3	23.88	22.24	-1.64	86122	64318	-21804	1.55	1.4	-0.15
	59.5	23.68	22.04	-1.64	85937	64291	-21646	1.54	1.39	-0.15
	59.7	23.49	21.85	-1.64	85750	64263	-21487	1.53	1.38	-0.15
	59.9	23.31	21.69	-1.62	85560	64235	-21325	1.52	1.36	-0.16
	60.1	23.13	21.54	-1.59	85371	64207	-21164	1.5	1.34	-0.16
	60.3	22.97	21.4	-1.57	85184	64179	-21005	1.48	1.31	-0.17
	60.5	22.82	21.28	-1.54	85001	64152	-20849	1.46	1.28	-0.18
	60.7	22.69	21.17	-1.52	84822	64124	-20698	1.43	1.25	-0.18
	60.9	22.57	21.07	-1.5	84648	64097	-20551	1.4	1.22	-0.18
	61.1	22.46	20.98	-1.48	84479	64070	-20409	1.36	1.19	-0.17
	61.3	22.36	20.9	-1.46	84312	64043	-20269	1.33	1.16	-0.17
	61.5	22.27	20.83	-1.44	84150	64017	-20133	1.3	1.13	-0.17
	61.7	22.2	20.77	-1.43	83991	63991	-20000	1.26	1.09	-0.17
	61.9	22.04	20.62	-1.42	83833	63964	-19869	1.26	1.09	-0.17
	62.1	21.88	20.48	-1.4	83672	63937	-19735	1.26	1.09	-0.17
	62.3	21.72	20.33	-1.39	83508	63909	-19599	1.25	1.09	-0.16
	62.5	21.56	20.18	-1.38	83340	63881	-19459	1.24	1.08	-0.16
	62.7	21.4	20.03	-1.37	83168	63851	-19317	1.24	1.08	-0.16
	62.9	21.24	19.87	-1.37	82992	63820	-19172	1.23	1.07	-0.16
	63.1	21.07	19.72	-1.35	82811	63788	-19023	1.22	1.07	-0.15
	63.3	20.91	19.57	-1.34	82626	63755	-18871	1.21	1.06	-0.15
	63.5	20.75	19.41	-1.34	82435	63721	-18714	1.2	1.06	-0.14
	63.7	20.59	19.26	-1.33	82239	63685	-18554	1.19	1.05	-0.14
	63.9	20.43	19.11	-1.32	82037	63649	-18388	1.18	1.04	-0.14
	64.1	20.26	18.95	-1.31	81828	63611	-18217	1.16	1.03	-0.13
	64.3	20.1	18.8	-1.3	81613	63571	-18042	1.15	1.02	-0.13
	64.5	19.94	18.64	-1.3	81390	63530	-17860	1.14	1.01	-0.13
	64.7	19.78	18.49	-1.29	81160	63487	-17673	1.12	1	-0.12
	64.9	19.68	18.38	-1.3	80929	63444	-17485	1.12	1	-0.12
	65.1	19.58	18.28	-1.3	80701	63402	-17299	1.12	1	-0.12
	65.3	19.47	18.19	-1.28	80478	63360	-17118	1.12	1	-0.12
	65.5	19.37	18.09	-1.28	80260	63319	-16941	1.12	1	-0.12
	65.7	19.27	17.99	-1.28	80047	63278	-16769	1.12	1	-0.12

Qp = 68,000 cfs (the flood which just overtops and fails the existing emergency spillway)

Breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	65.9	19.18	17.9	-1.28	79838	63239	-16599	1.12	1	-0.12
	66.1	19.08	17.8	-1.28	79636	63200	-16436	1.12	1	-0.12
	66.3	18.98	17.71	-1.27	79438	63162	-16276	1.12	1	-0.12
	66.5	18.89	17.62	-1.27	79245	63125	-16120	1.13	1	-0.13
	66.7	18.79	17.53	-1.26	79058	63088	-15970	1.13	1	-0.13
	66.9	18.7	17.44	-1.26	78876	63053	-15823	1.13	1.01	-0.12
	67.1	18.6	17.35	-1.25	78700	63018	-15682	1.14	1.01	-0.13
	67.3	18.51	17.26	-1.25	78529	62984	-15545	1.14	1.02	-0.12
	67.5	18.41	17.18	-1.23	78365	62951	-15414	1.15	1.02	-0.13
	67.7	18.32	17.09	-1.23	78205	62919	-15286	1.15	1.03	-0.12
	67.9	18.24	17.02	-1.22	78051	62888	-15163	1.16	1.03	-0.13
	68.1	18.15	16.94	-1.21	77900	62857	-15043	1.17	1.04	-0.13
	68.3	18.07	16.87	-1.2	77754	62827	-14927	1.18	1.05	-0.13
	68.5	17.99	16.79	-1.2	77612	62798	-14814	1.19	1.06	-0.13
	68.7	17.9	16.72	-1.18	77475	62769	-14706	1.2	1.07	-0.13
	68.9	17.81	16.64	-1.17	77344	62742	-14602	1.21	1.08	-0.13
	69.1	17.73	16.57	-1.16	77218	62715	-14503	1.22	1.09	-0.13
	69.3	17.64	16.5	-1.14	77098	62689	-14409	1.23	1.1	-0.13
	69.5	17.55	16.42	-1.13	76984	62664	-14320	1.24	1.11	-0.13
	69.7	17.47	16.35	-1.12	76877	62639	-14238	1.25	1.12	-0.13
	69.9	17.39	16.28	-1.11	76774	62615	-14159	1.25	1.12	-0.13
	70.1	17.3	16.21	-1.09	76674	62591	-14083	1.26	1.13	-0.13
	70.3	17.22	16.14	-1.08	76578	62567	-14011	1.27	1.14	-0.13
	70.5	17.14	16.06	-1.08	76485	62545	-13940	1.28	1.15	-0.13
	70.7	17.06	15.99	-1.07	76395	62522	-13873	1.29	1.16	-0.13
	70.905	16.92	15.87	-1.05	76303	62499	-13804	1.27	1.15	-0.12
	71.111	16.78	15.75	-1.03	76210	62475	-13735	1.26	1.13	-0.13
	71.317	16.64	15.62	-1.02	76116	62451	-13665	1.24	1.12	-0.12
	71.522	16.51	15.5	-1.01	76021	62426	-13595	1.22	1.11	-0.12
	71.728	16.37	15.38	-0.99	75925	62401	-13524	1.2	1.09	-0.11
	71.933	16.24	15.26	-0.98	75828	62374	-13454	1.19	1.07	-0.12
	72.139	16.11	15.14	-0.97	75729	62348	-13381	1.17	1.06	-0.11
	72.344	15.97	15.03	-0.94	75630	62320	-13310	1.16	1.05	-0.11
	72.55	15.84	14.91	-0.93	75531	62292	-13239	1.14	1.03	-0.11
	72.756	15.71	14.79	-0.92	75430	62264	-13166	1.13	1.02	-0.11
	72.961	15.58	14.68	-0.9	75329	62235	-13094	1.11	1.01	-0.1
	73.167	15.45	14.56	-0.89	75227	62205	-13022	1.1	1	-0.1
	73.372	15.32	14.44	-0.88	75125	62175	-12950	1.08	0.98	-0.1
	73.578	15.19	14.33	-0.86	75021	62144	-12877	1.07	0.97	-0.1
	73.783	15.06	14.22	-0.84	74918	62113	-12805	1.06	0.96	-0.1
	73.989	14.94	14.1	-0.84	74813	62081	-12732	1.04	0.95	-0.09
	74.194	14.81	13.99	-0.82	74709	62049	-12660	1.03	0.94	-0.09
	74.4	14.68	13.88	-0.8	74604	62016	-12588	1.02	0.93	-0.09

**IDF (Qp = 154,500 cfs) (Both emergency spillway and fuse plug breach)**

Emergency spillway breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Fuse plug breaches as designed.

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
Headwater	40.08	74.37	77.09	2.72	154102	151516	-2586	5.26	4.55	-0.71
Tailwater	40.15	57.59	57.47	-0.12	154102	151516	-2586	1.69	1.68	-0.01
	40.5	56.87	56.75	-0.12	154078	151499	-2579	1.96	1.95	-0.01
Crooked Rd.	40.76	56.1	55.98	-0.12	154061	151486	-2575	2.22	2.2	-0.02
	40.97	55.35	55.22	-0.13	154045	151475	-2570	2.17	2.15	-0.02
	41.18	54.63	54.5	-0.13	154027	151461	-2566	2.11	2.09	-0.02
	41.39	53.96	53.83	-0.13	154006	151446	-2560	2.04	2.02	-0.02
	41.6	53.34	53.21	-0.13	153981	151428	-2553	1.96	1.94	-0.02
	41.81	52.77	52.64	-0.13	153953	151407	-2546	1.9	1.85	-0.05
	42.02	52.27	52.13	-0.14	153922	151384	-2538	1.83	1.75	-0.08
	42.23	51.83	51.69	-0.14	153888	151359	-2529	1.74	1.64	-0.1
	42.44	51.46	51.32	-0.14	153851	151331	-2520	1.63	1.53	-0.1
	42.65	51.15	51.01	-0.14	153812	151302	-2510	1.5	1.42	-0.08
	42.864	50.94	50.79	-0.15	153772	151274	-2498	1.53	1.46	-0.07
	43.077	50.71	50.57	-0.14	153736	151246	-2490	1.55	1.51	-0.04
	43.291	50.47	50.32	-0.15	153702	151221	-2481	1.58	1.56	-0.02
	43.505	50.21	50.06	-0.15	153671	151198	-2473	1.63	1.62	-0.01
	43.718	49.95	49.8	-0.15	153643	151176	-2467	1.68	1.67	-0.01
	43.932	49.69	49.55	-0.14	153618	151158	-2460	1.73	1.71	-0.02
	44.145	49.45	49.32	-0.13	153597	151141	-2456	1.76	1.75	-0.01
	44.359	49.22	49.09	-0.13	153577	151126	-2451	1.8	1.79	-0.01
	44.573	48.98	48.85	-0.13	153558	151112	-2446	1.85	1.83	-0.02
	44.786	48.74	48.61	-0.13	153540	151098	-2442	1.9	1.88	-0.02
	45	48.48	48.35	-0.13	153523	151084	-2439	1.96	1.95	-0.01
	45.207	48.28	48.15	-0.13	153507	151072	-2435	1.97	1.96	-0.01
	45.414	48.08	47.95	-0.13	153492	151060	-2432	1.99	1.97	-0.02
	45.621	47.88	47.75	-0.13	153477	151048	-2429	2	1.99	-0.01
	45.829	47.67	47.54	-0.13	153463	151037	-2426	2.02	2.01	-0.01
	46.036	47.45	47.32	-0.13	153450	151026	-2424	2.04	2.03	-0.01
	46.243	47.22	47.1	-0.12	153436	151015	-2421	2.07	2.05	-0.02
	46.45	46.99	46.86	-0.13	153424	151005	-2419	2.1	2.08	-0.02
	46.657	46.73	46.61	-0.12	153411	150995	-2416	2.13	2.11	-0.02
	46.864	46.47	46.34	-0.13	153399	150985	-2414	2.16	2.15	-0.01
	47.071	46.18	46.05	-0.13	153387	150975	-2412	2.2	2.19	-0.01
	47.279	45.87	45.75	-0.12	153375	150966	-2409	2.25	2.24	-0.01
	47.486	45.53	45.41	-0.12	153364	150957	-2407	2.31	2.29	-0.02
	47.693	45.17	45.05	-0.12	153352	150947	-2405	2.38	2.36	-0.02
	47.9	44.77	44.65	-0.12	153340	150938	-2402	2.46	2.44	-0.02
	48.1	44.3	44.19	-0.11	153328	150928	-2400	2.44	2.42	-0.02
	48.3	43.84	43.73	-0.11	153315	150918	-2397	2.42	2.41	-0.01
	48.5	43.39	43.27	-0.12	153300	150907	-2393	2.41	2.39	-0.02
	48.7	42.93	42.82	-0.11	153285	150895	-2390	2.39	2.37	-0.02
	48.9	42.49	42.37	-0.12	153268	150881	-2387	2.37	2.35	-0.02
	49.1	42.05	41.94	-0.11	153249	150867	-2382	2.35	2.33	-0.02
	49.3	41.62	41.51	-0.11	153229	150852	-2377	2.33	2.31	-0.02
	49.5	41.2	41.09	-0.11	153207	150835	-2372	2.3	2.29	-0.01
	49.7	40.8	40.68	-0.12	153184	150817	-2367	2.28	2.26	-0.02
	49.9	40.41	40.29	-0.12	153159	150797	-2362	2.25	2.23	-0.02
	50.1	40.03	39.92	-0.11	153132	150777	-2355	2.21	2.19	-0.02
	50.3	39.68	39.56	-0.12	153103	150754	-2349	2.18	2.16	-0.02
	50.5	39.34	39.23	-0.11	153073	150731	-2342	2.13	2.12	-0.01
	50.7	39.02	38.91	-0.11	153040	150706	-2334	2.09	2.07	-0.02
	50.9	38.72	38.61	-0.11	153007	150679	-2328	2.04	2.02	-0.02
	51.1	38.44	38.33	-0.11	152971	150652	-2319	1.99	1.98	-0.01
	51.3	38.18	38.07	-0.11	152934	150623	-2311	1.94	1.92	-0.02
	51.5	37.94	37.83	-0.11	152896	150593	-2303	1.89	1.87	-0.02
	51.705	37.74	37.64	-0.1	152856	150562	-2294	1.9	1.88	-0.02
	51.91	37.54	37.44	-0.1	152815	150531	-2284	1.9	1.89	-0.01
	52.115	37.34	37.23	-0.11	152774	150499	-2275	1.91	1.89	-0.02
	52.32	37.13	37.02	-0.11	152733	150467	-2266	1.92	1.9	-0.02
	52.525	36.91	36.81	-0.1	152691	150434	-2257	1.93	1.91	-0.02

**IDF (Qp = 154,500 cfs) (Both emergency spillway and fuse plug breach)**

City of Tallahassee  
C. H. Corn Hydro Facility  
Attachment 2

Emergency spillway breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

Fuse plug breaches as designed.

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	52.73	36.7	36.6	-0.1	152648	150401	-2247	1.94	1.92	-0.02
	52.935	36.48	36.38	-0.1	152605	150367	-2238	1.95	1.93	-0.02
	53.14	36.25	36.15	-0.1	152561	150333	-2228	1.96	1.94	-0.02
	53.345	36.02	35.92	-0.1	152516	150298	-2218	1.97	1.95	-0.02
	53.55	35.78	35.69	-0.09	152470	150262	-2208	1.98	1.97	-0.01
	53.755	35.54	35.45	-0.09	152423	150226	-2197	2	1.98	-0.02
	53.96	35.29	35.2	-0.09	152375	150188	-2187	2.01	2	-0.01
	54.165	35.04	34.95	-0.09	152326	150150	-2176	2.03	2.01	-0.02
	54.37	34.78	34.69	-0.09	152275	150111	-2164	2.05	2.03	-0.02
	54.575	34.52	34.43	-0.09	152223	150070	-2153	2.07	2.05	-0.02
	54.78	34.24	34.16	-0.08	152169	150028	-2141	2.09	2.08	-0.01
	54.985	33.96	33.88	-0.08	152113	149985	-2128	2.12	2.1	-0.02
	55.19	33.67	33.59	-0.08	152056	149940	-2116	2.15	2.13	-0.02
	55.395	33.38	33.3	-0.08	151995	149894	-2101	2.18	2.16	-0.02
	55.6	33.07	33	-0.07	151933	149846	-2087	2.21	2.2	-0.01
	55.809	32.74	32.66	-0.08	151866	149794	-2072	2.18	2.17	-0.01
	56.018	32.42	32.35	-0.07	151795	149739	-2056	2.14	2.13	-0.01
	56.227	32.13	32.06	-0.07	151720	149681	-2039	2.09	2.09	0
	56.436	31.87	31.79	-0.08	151641	149620	-2021	2.05	2.05	0
	56.645	31.62	31.55	-0.07	151558	149556	-2002	2	2	0
	56.855	31.4	31.32	-0.08	151473	149491	-1982	1.95	1.95	0
	57.064	31.19	31.12	-0.07	151386	149424	-1962	1.9	1.89	-0.01
	57.273	31	30.93	-0.07	151297	149355	-1942	1.84	1.84	0
	57.482	30.83	30.76	-0.07	151206	149286	-1920	1.79	1.79	0
	57.691	30.68	30.6	-0.08	151115	149216	-1899	1.74	1.73	-0.01
	57.9	30.54	30.46	-0.08	151023	149146	-1877	1.69	1.68	-0.01
	58.1	30.38	30.31	-0.07	150935	149079	-1856	1.69	1.68	-0.01
	58.3	30.23	30.16	-0.07	150847	149011	-1836	1.69	1.68	-0.01
	58.5	30.08	30.01	-0.07	150758	148943	-1815	1.69	1.68	-0.01
	58.7	29.93	29.86	-0.07	150668	148875	-1793	1.68	1.68	0
	58.9	29.78	29.71	-0.07	150579	148806	-1773	1.68	1.68	0
	59.1	29.64	29.57	-0.07	150489	148738	-1751	1.67	1.67	0
	59.3	29.49	29.43	-0.06	150399	148669	-1730	1.67	1.67	0
	59.5	29.35	29.29	-0.06	150309	148600	-1709	1.66	1.66	0
	59.7	29.22	29.15	-0.07	150218	148532	-1686	1.65	1.65	0
	59.9	29.09	29.02	-0.07	150129	148463	-1666	1.63	1.64	0.01
	60.1	28.96	28.89	-0.07	150039	148394	-1645	1.62	1.62	0
	60.3	28.84	28.77	-0.07	149950	148326	-1624	1.6	1.61	0.01
	60.5	28.72	28.65	-0.07	149862	148259	-1603	1.59	1.59	0
	60.7	28.6	28.54	-0.06	149774	148191	-1583	1.57	1.57	0
	60.9	28.49	28.43	-0.06	149687	148125	-1562	1.55	1.55	0
	61.1	28.39	28.33	-0.06	149601	148059	-1542	1.53	1.53	0
	61.3	28.29	28.23	-0.06	149516	147993	-1523	1.51	1.5	-0.01
	61.5	28.2	28.13	-0.07	149432	147929	-1503	1.48	1.48	0
	61.7	28.11	28.04	-0.07	149350	147865	-1485	1.46	1.45	-0.01
	61.9	27.97	27.91	-0.06	149267	147802	-1465	1.45	1.44	-0.01
	62.1	27.83	27.77	-0.06	149184	147738	-1446	1.43	1.43	0
	62.3	27.7	27.64	-0.06	149101	147673	-1428	1.42	1.42	0
	62.5	27.56	27.5	-0.06	149016	147607	-1409	1.41	1.41	0
	62.7	27.43	27.37	-0.06	148931	147541	-1390	1.39	1.39	0
	62.9	27.29	27.23	-0.06	148845	147474	-1371	1.38	1.38	0
	63.1	27.16	27.1	-0.06	148758	147407	-1351	1.36	1.37	0.01
	63.3	27.02	26.96	-0.06	148671	147338	-1333	1.34	1.35	0.01
	63.5	26.89	26.83	-0.06	148583	147269	-1314	1.32	1.34	0.02
	63.7	26.76	26.7	-0.06	148494	147200	-1294	1.31	1.32	0.01
	63.9	26.63	26.57	-0.06	148405	147130	-1275	1.29	1.3	0.01
	64.1	26.5	26.44	-0.06	148315	147059	-1256	1.28	1.29	0.01
	64.3	26.38	26.32	-0.06	148225	146987	-1238	1.26	1.27	0.01
	64.5	26.26	26.2	-0.06	148135	146916	-1219	1.25	1.25	0
	64.7	26.15	26.09	-0.06	148046	146844	-1202	1.23	1.23	0
	64.9	26.07	26.01	-0.06	147959	146774	-1185	1.23	1.23	0

**IDF (Qp = 154,500 cfs) (Both emergency spillway and fuse plug breach)**

Emergency spillway breach assumptions:

Water surface elevation at time of breach: 72.3 feet (crest of emergency spillway)

Breach side slopes: 1:1

Breach bottom elevation: 46 feet (approximately 10' above the foundation, but similar to the 1957 dam failure level)

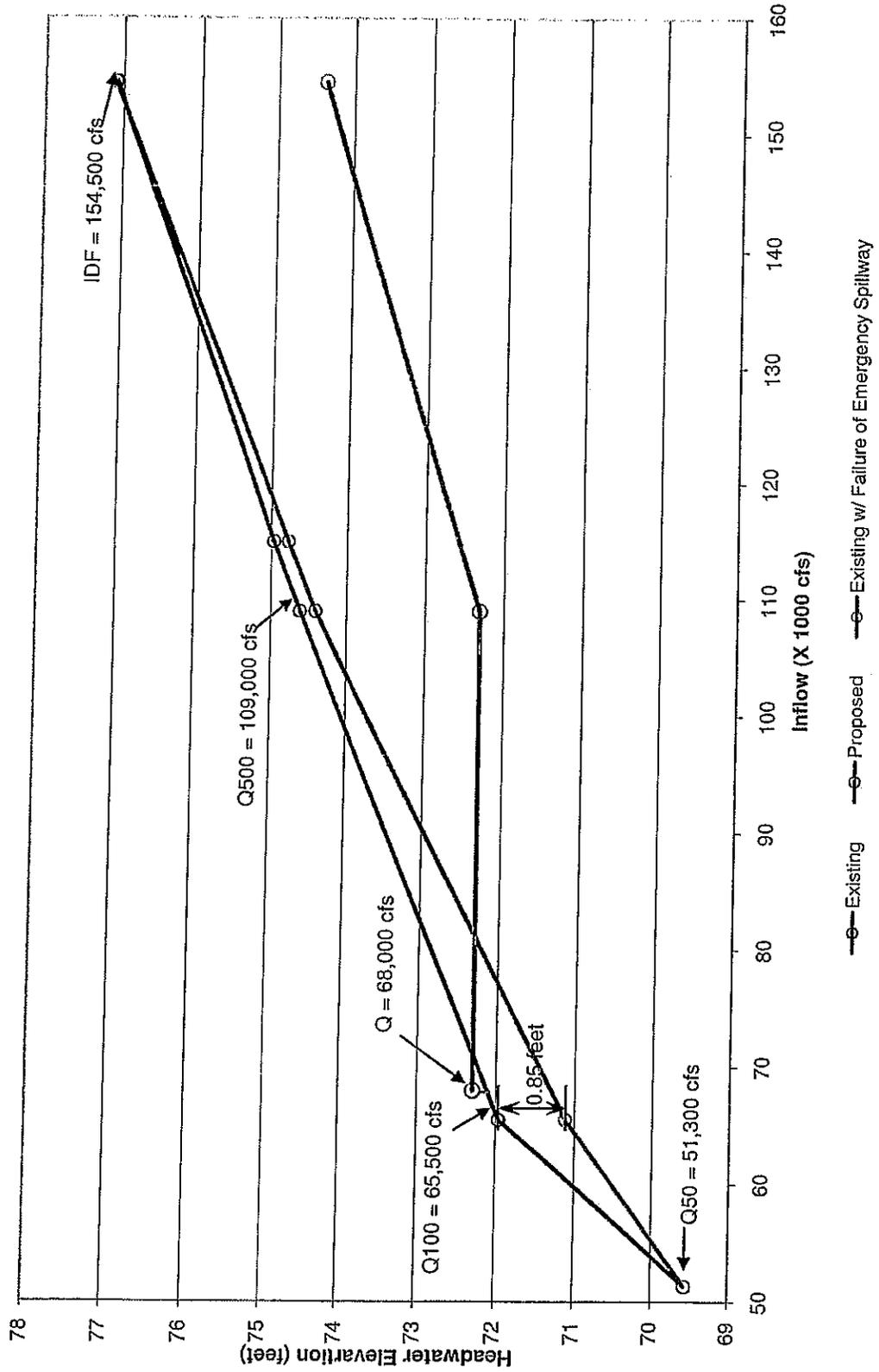
Average breach width: 131 feet (approximately 5 times breach height)

Time of breach formation: 0.5 hours

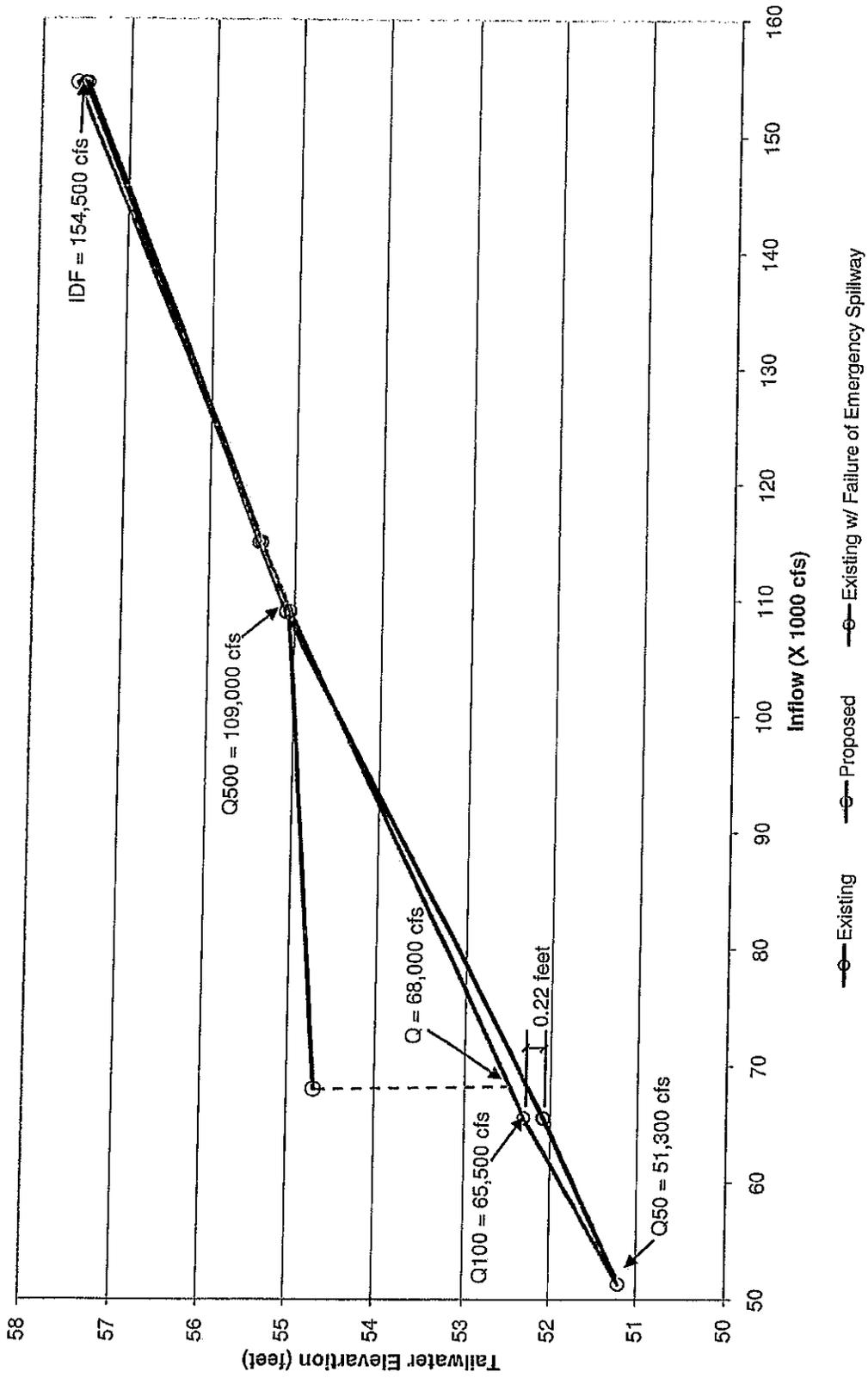
Fuse plug breaches as designed.

Notes	Cross Section Location (mi)	Existing Maximum Stage Elevation (ft MSL)	Proposed Maximum Stage Elevation (ft MSL)	Diff. in stage Prop. - Exist. (ft)	Existing Maximum Flow (cfs)	Proposed Maximum Flow (cfs)	Diff. in flow Prop. - Exist. (cfs)	Existing Maximum Flow Velocity (ft/sec)	Proposed Maximum Flow Velocity (ft/sec)	Diff. in velocity Prop. - Exist. (cfs)
	65.1	25.99	25.93	-0.06	147875	146706	-1169	1.23	1.23	0
	65.3	25.9	25.85	-0.05	147794	146641	-1153	1.23	1.23	0
	65.5	25.82	25.77	-0.05	147716	146578	-1138	1.23	1.23	0
	65.7	25.74	25.68	-0.06	147640	146516	-1124	1.23	1.24	0.01
	65.9	25.65	25.6	-0.05	147568	146457	-1111	1.23	1.24	0.01
	66.1	25.56	25.51	-0.05	147498	146400	-1098	1.24	1.24	0
	66.3	25.48	25.42	-0.06	147430	146345	-1085	1.24	1.25	0.01
	66.5	25.38	25.33	-0.05	147365	146292	-1073	1.24	1.25	0.01
	66.7	25.29	25.24	-0.05	147302	146240	-1062	1.25	1.26	0.01
	66.9	25.2	25.14	-0.06	147241	146191	-1050	1.25	1.26	0.01
	67.1	25.1	25.04	-0.06	147182	146142	-1040	1.26	1.27	0.01
	67.3	24.99	24.94	-0.05	147125	146095	-1030	1.27	1.28	0.01
	67.5	24.89	24.84	-0.05	147070	146049	-1021	1.28	1.28	0
	67.7	24.78	24.73	-0.05	147016	146004	-1012	1.29	1.29	0
	67.9	24.68	24.63	-0.05	146964	145961	-1003	1.3	1.3	0
	68.1	24.58	24.53	-0.05	146913	145919	-994	1.31	1.31	0
	68.3	24.48	24.43	-0.05	146865	145879	-986	1.32	1.31	-0.01
	68.5	24.37	24.32	-0.05	146819	145841	-978	1.33	1.32	-0.01
	68.7	24.27	24.22	-0.05	146774	145804	-970	1.34	1.33	-0.01
	68.9	24.16	24.11	-0.05	146731	145768	-963	1.35	1.35	0
	69.1	24.05	24	-0.05	146691	145735	-956	1.36	1.36	0
	69.3	23.94	23.89	-0.05	146652	145702	-950	1.38	1.37	-0.01
	69.5	23.82	23.78	-0.04	146615	145672	-943	1.39	1.39	0
	69.7	23.71	23.66	-0.05	146580	145642	-938	1.41	1.4	-0.01
	69.9	23.59	23.55	-0.04	146546	145614	-932	1.42	1.42	0
	70.1	23.47	23.43	-0.04	146513	145586	-927	1.44	1.43	-0.01
	70.3	23.35	23.31	-0.04	146482	145560	-922	1.45	1.45	0
	70.5	23.22	23.18	-0.04	146451	145534	-917	1.47	1.47	0
	70.7	23.09	23.05	-0.04	146422	145510	-912	1.49	1.49	0
	70.905	22.86	22.81	-0.05	146392	145484	-908	1.47	1.46	-0.01
	71.111	22.62	22.58	-0.04	146360	145458	-902	1.44	1.44	0
	71.317	22.38	22.34	-0.04	146328	145431	-897	1.42	1.42	0
	71.522	22.14	22.1	-0.04	146294	145402	-892	1.4	1.4	0
	71.728	21.9	21.86	-0.04	146260	145374	-886	1.38	1.38	0
	71.933	21.66	21.62	-0.04	146225	145344	-881	1.37	1.36	-0.01
	72.139	21.41	21.37	-0.04	146189	145315	-874	1.35	1.35	0
	72.344	21.17	21.13	-0.04	146153	145284	-869	1.34	1.34	0
	72.55	20.92	20.88	-0.04	146116	145253	-863	1.33	1.32	-0.01
	72.756	20.67	20.64	-0.03	146078	145222	-856	1.32	1.31	-0.01
	72.961	20.42	20.38	-0.04	146041	145190	-851	1.31	1.3	-0.01
	73.167	20.17	20.13	-0.04	146003	145159	-844	1.3	1.3	0
	73.372	19.92	19.88	-0.04	145966	145128	-838	1.29	1.29	0
	73.578	19.67	19.63	-0.04	145931	145099	-832	1.28	1.28	0
	73.783	19.42	19.39	-0.03	145897	145071	-826	1.28	1.27	-0.01
	73.989	19.17	19.14	-0.03	145864	145043	-821	1.27	1.27	0
	74.194	18.92	18.9	-0.02	145833	145017	-816	1.26	1.26	0
	74.4	18.68	18.65	-0.03	145802	144992	-810	1.26	1.25	-0.01

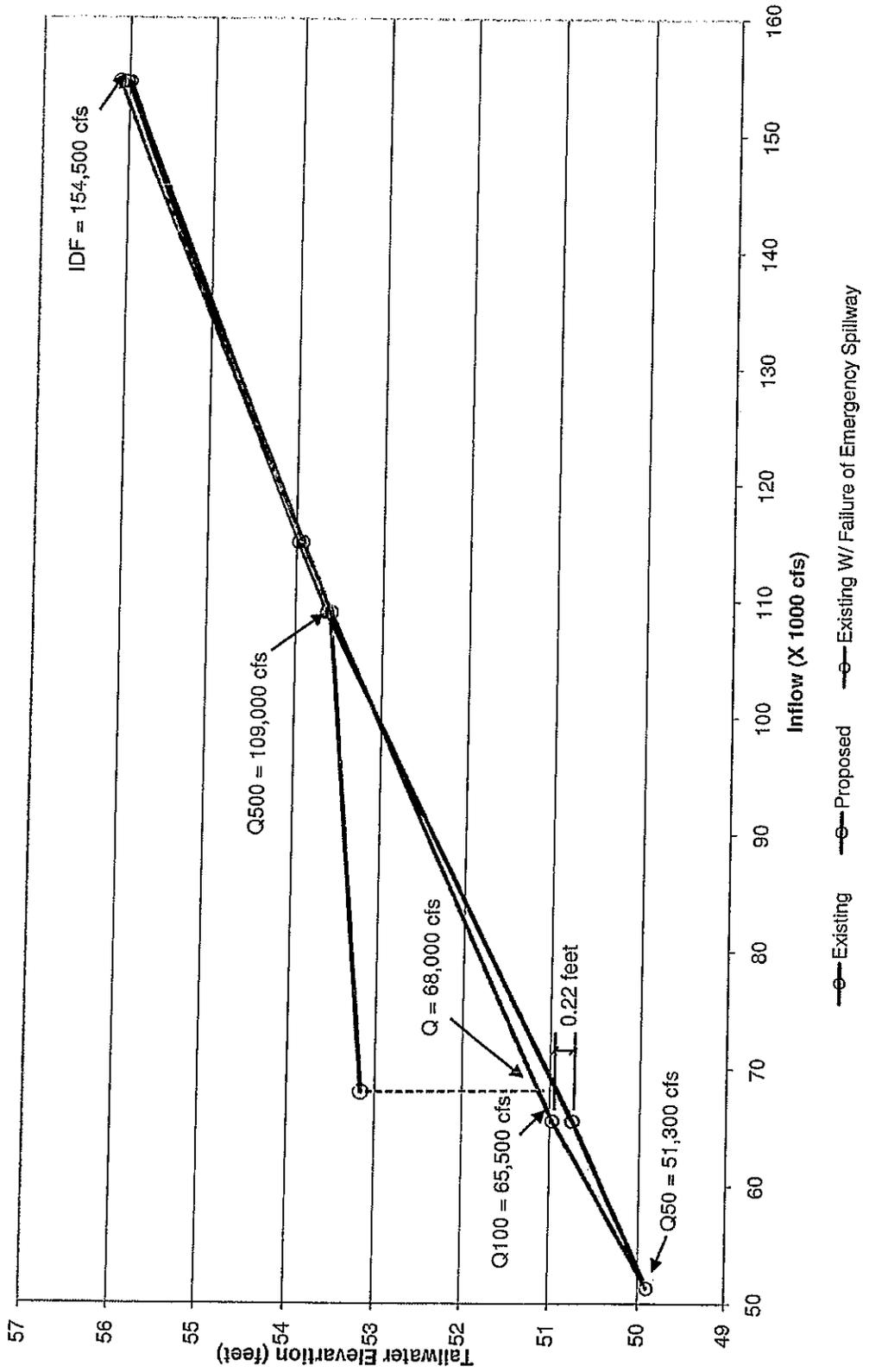
### Jackson Bluff Dam Inflow vs. Headwater Elevation



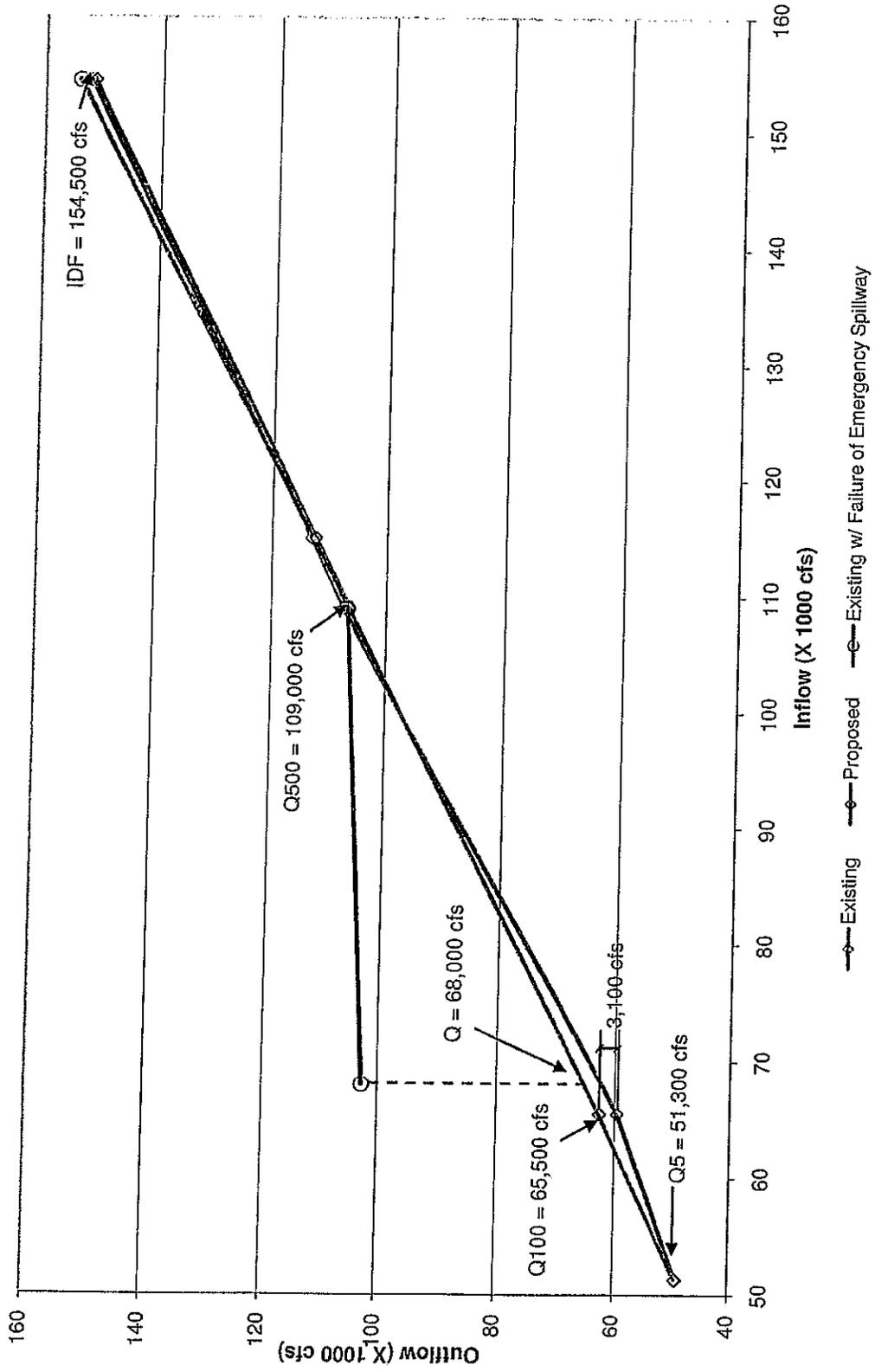
### Jackson Bluff Dam Inflow vs. Tailwater Elevation



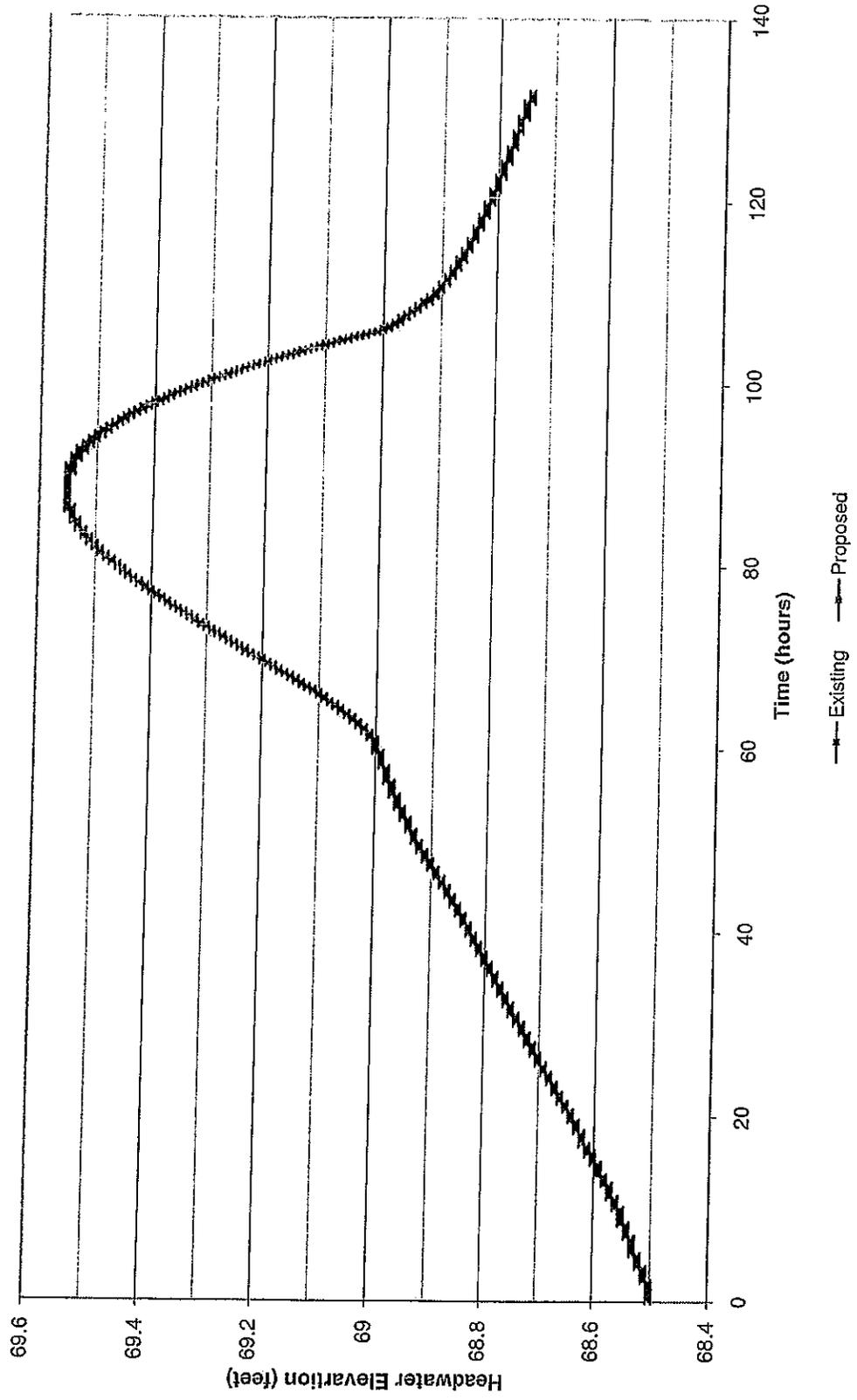
### Jackson Bluff Dam Inflow vs. Water Surface Elevation @ Crooked Road



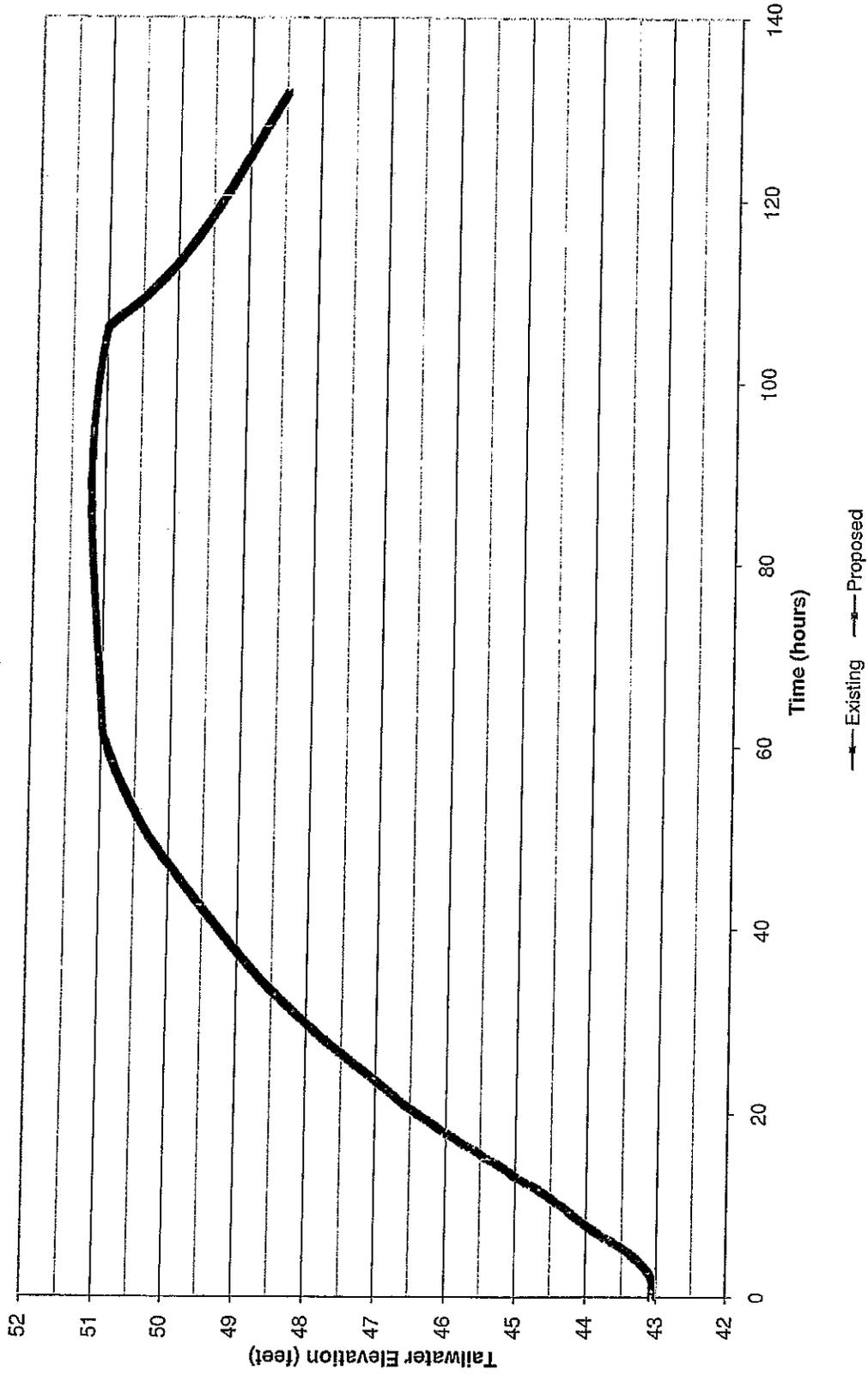
**Jackson Bluff Dam  
 Inflow vs. Outflow**



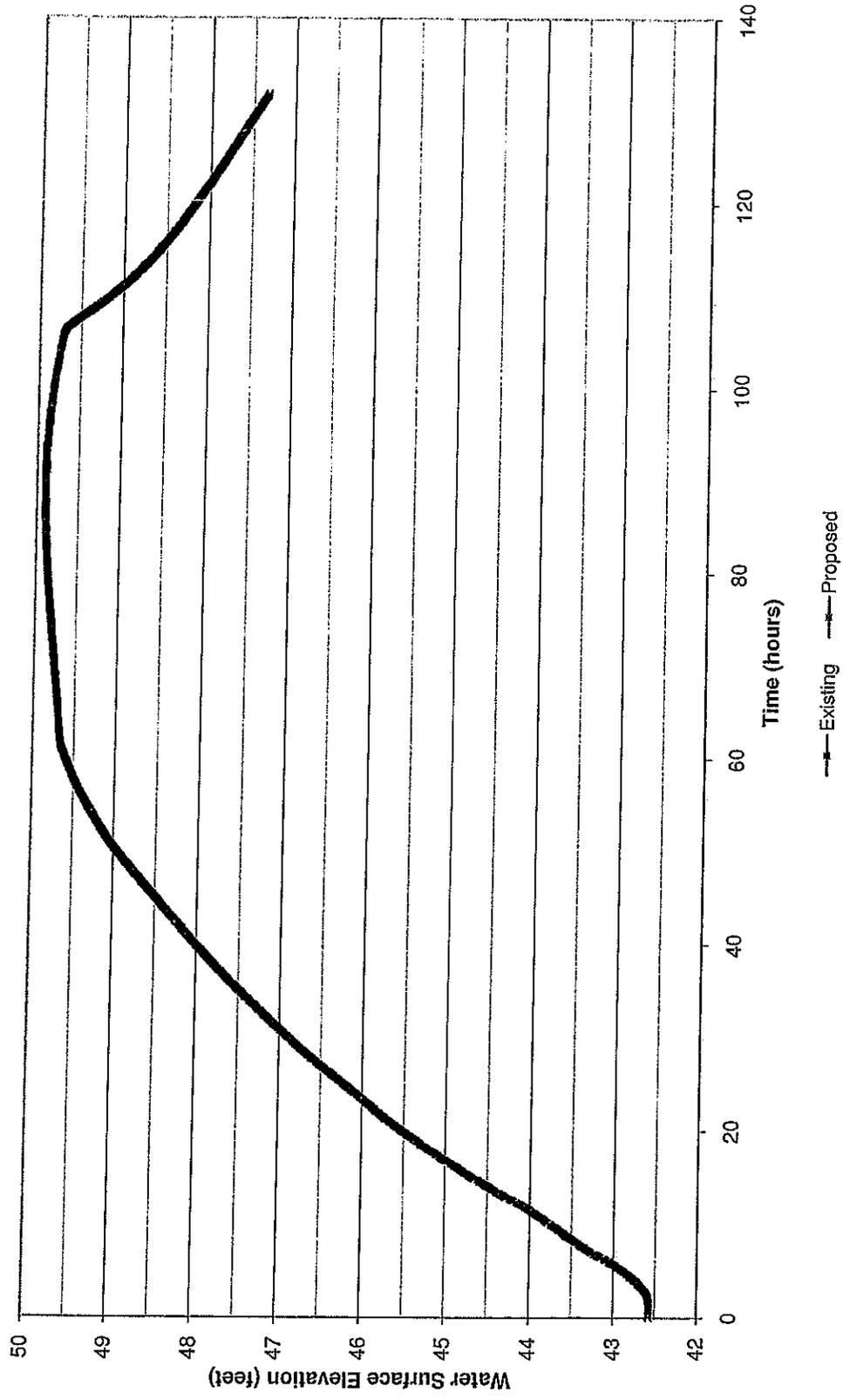
**Headwater Elevation vs. Time  
50-Year Flood ( $Q_p = 51,300$  cfs)**



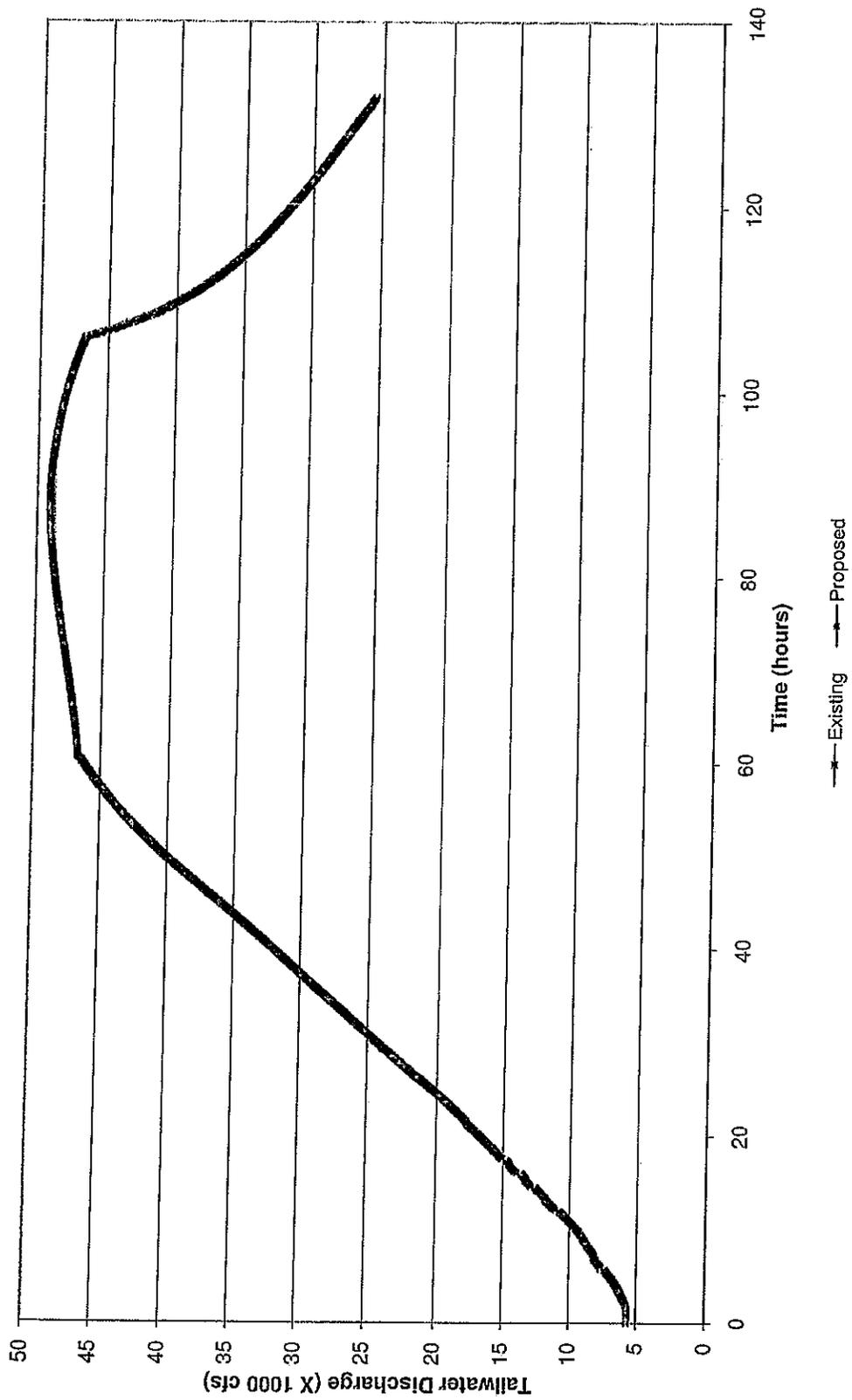
**Tailwater Elevation vs. Time**  
**50-Year Flood ( $Q_p = 51,300$  cfs)**



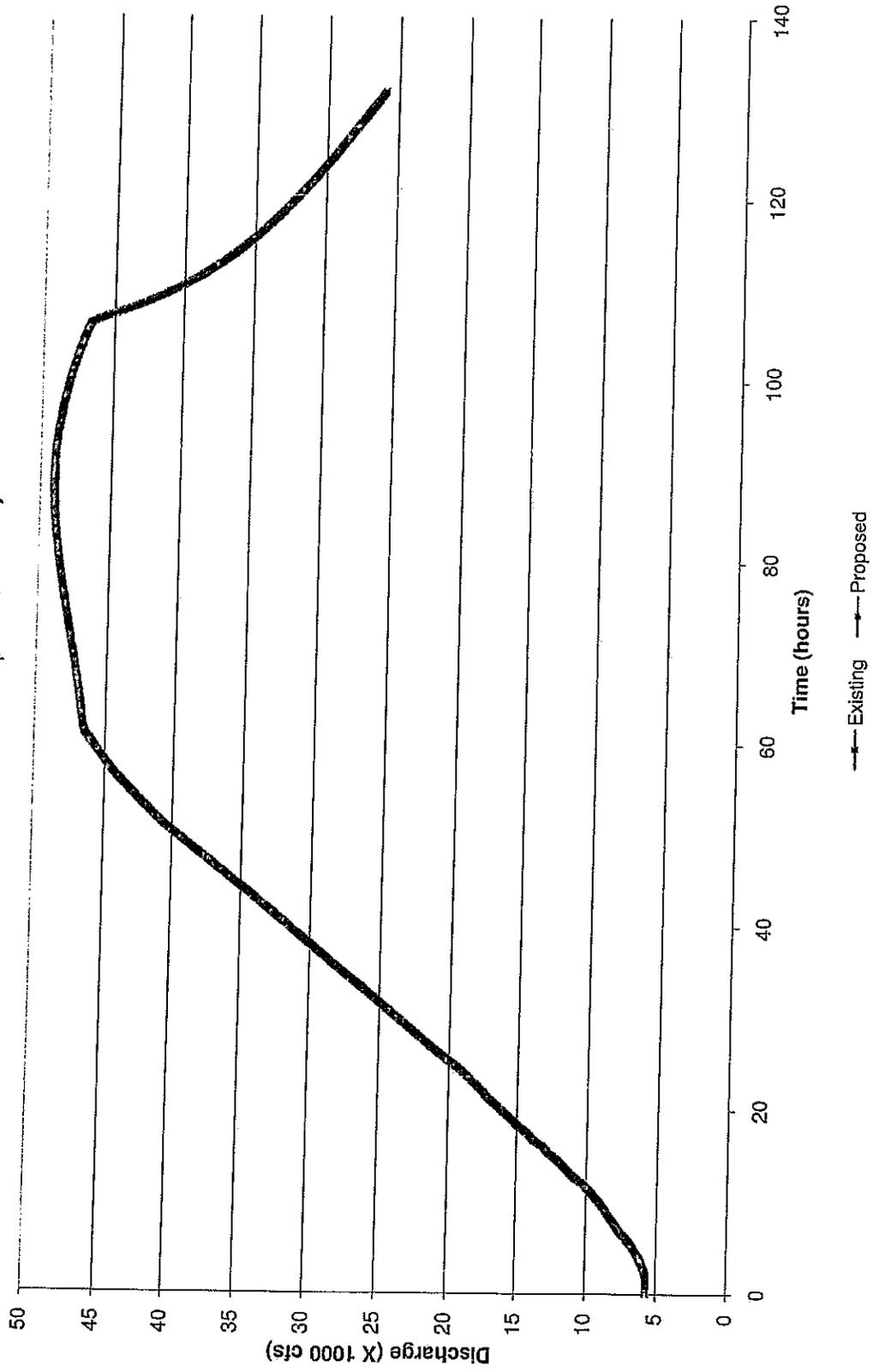
Water Surface Elevation vs. Time @ Crooked Rd.  
50-Year Flood ( $Q_p = 51,300$  cfs)



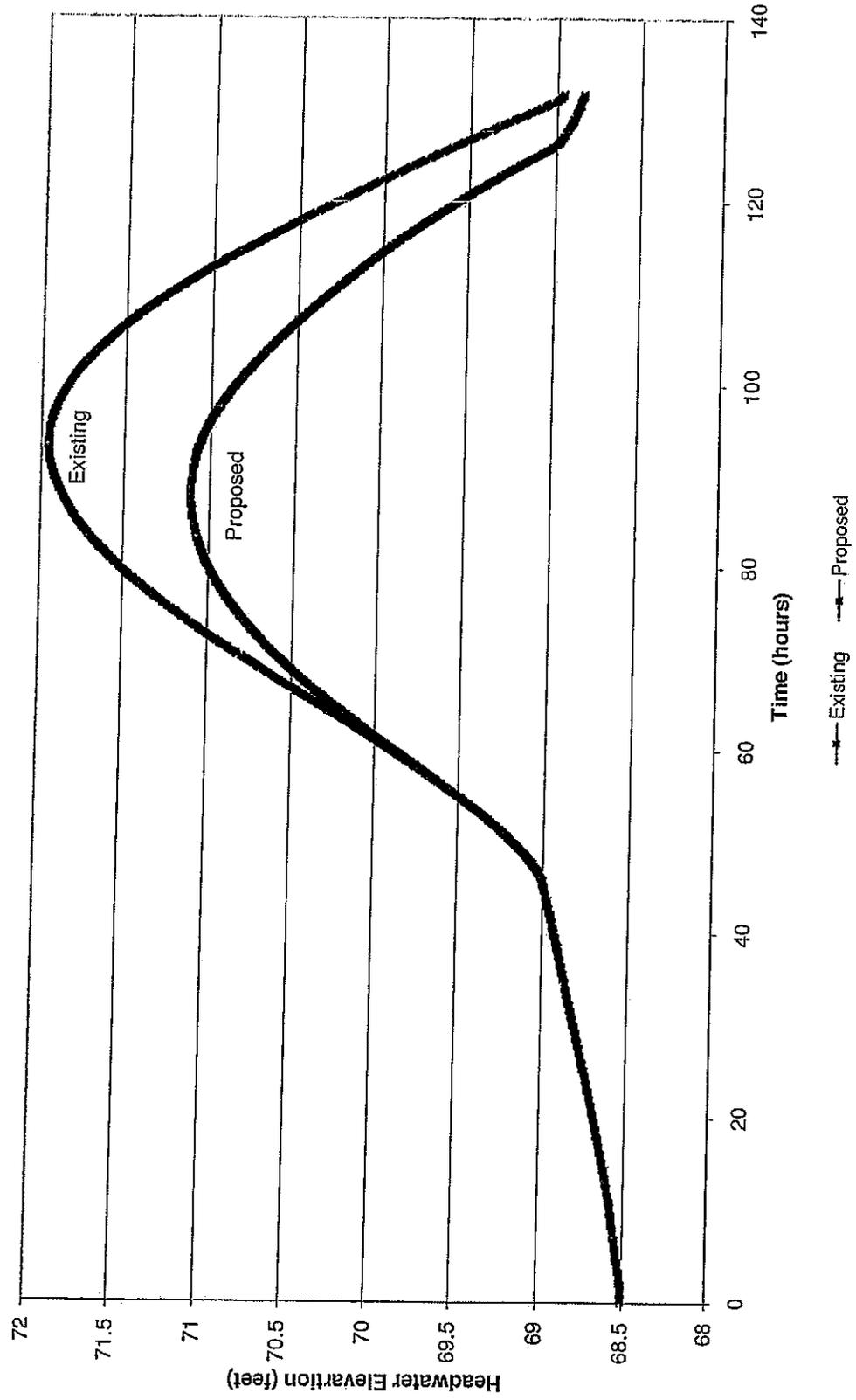
Tailwater Discharge vs. Time  
50-Year Flood ( $Q_p = 51,300$  cfs)



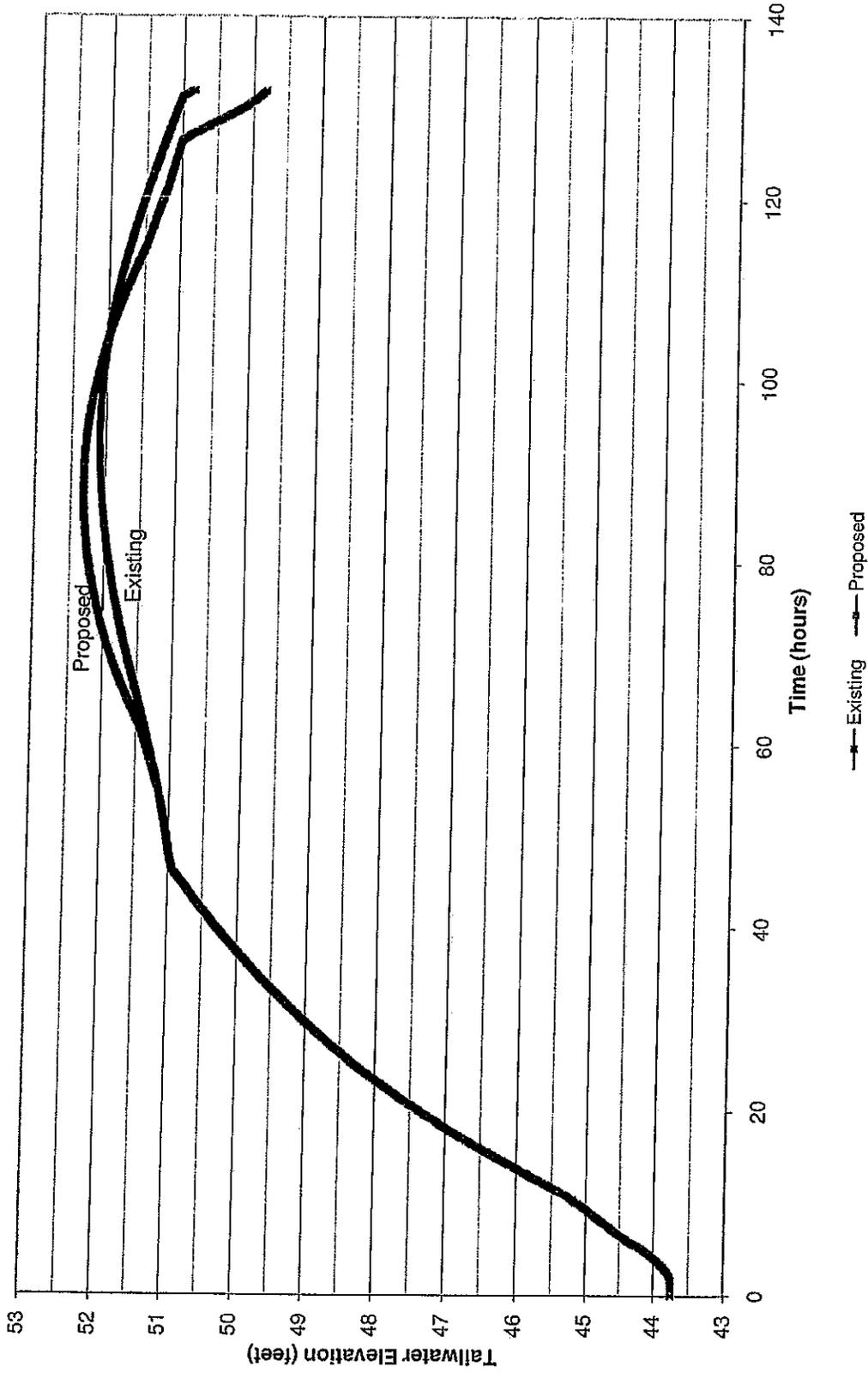
Discharge vs. Time @ Crooked Rd.  
50-Year Flood ( $Q_p = 51,300$  cfs)



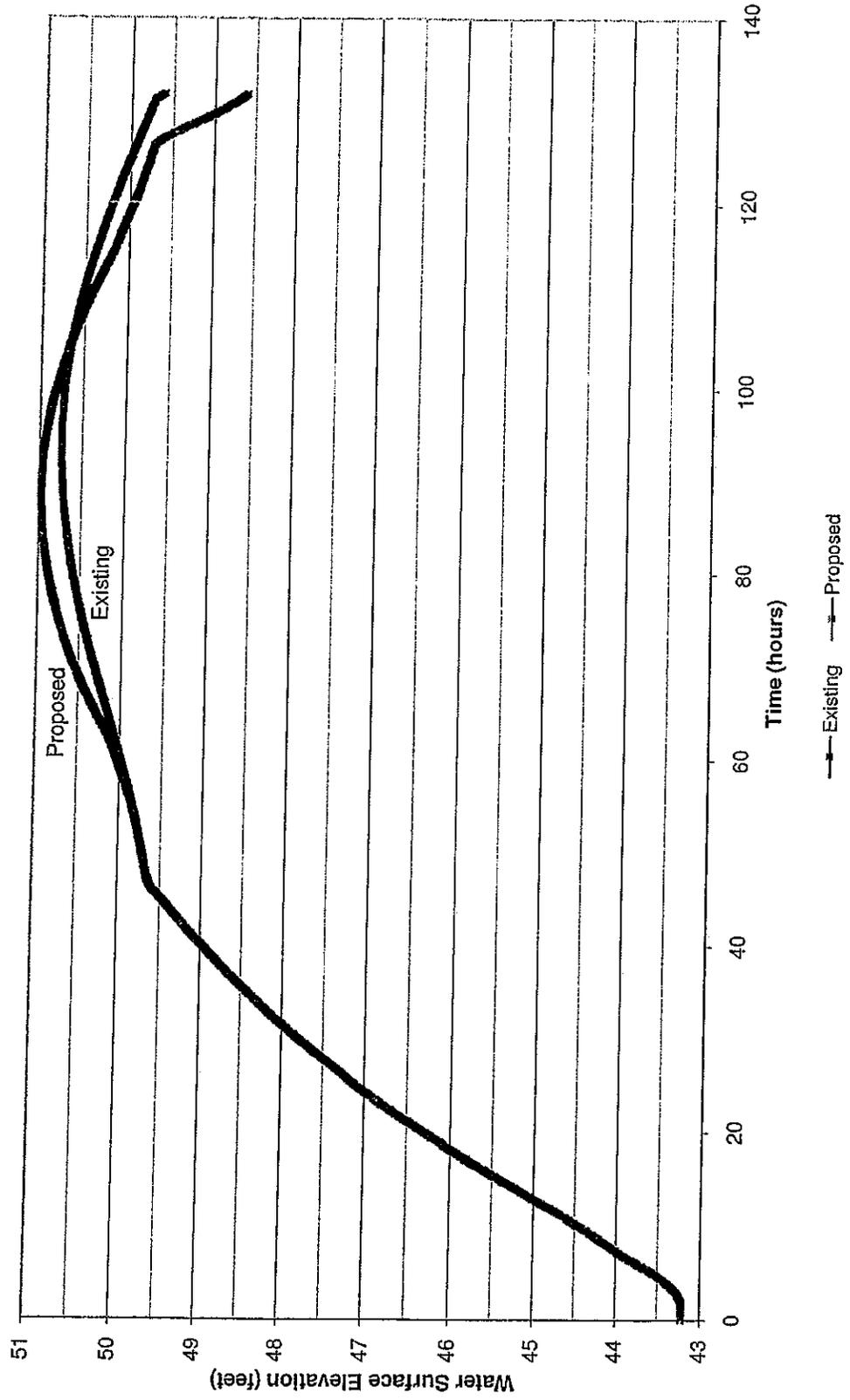
### Headwater Elevation vs. Time 100-Year Flood ( $Q_p = 65,500$ cfs)



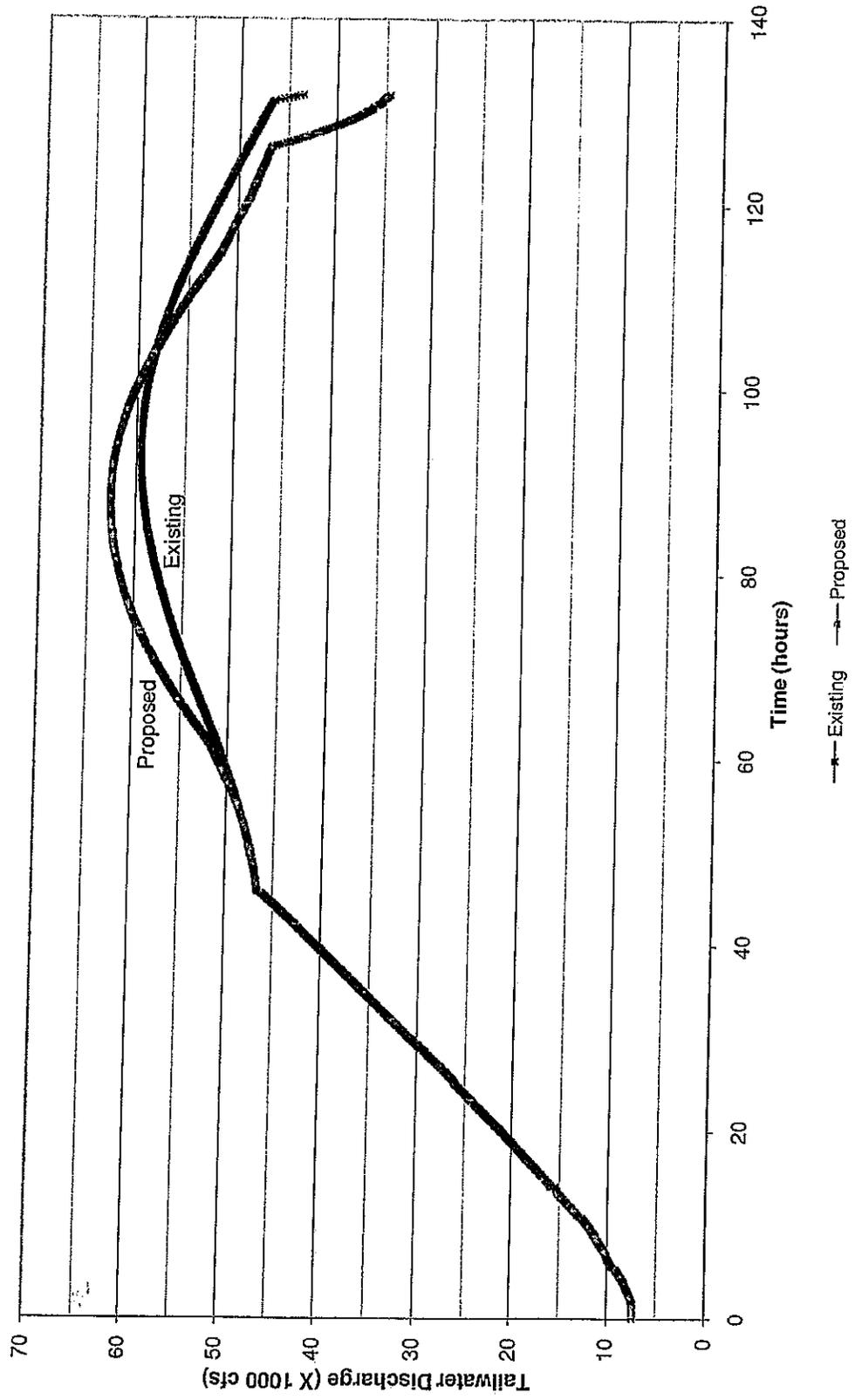
**Tailwater Elevation vs. Time  
100-Year Flood ( $Q_p = 65,500$  cfs)**



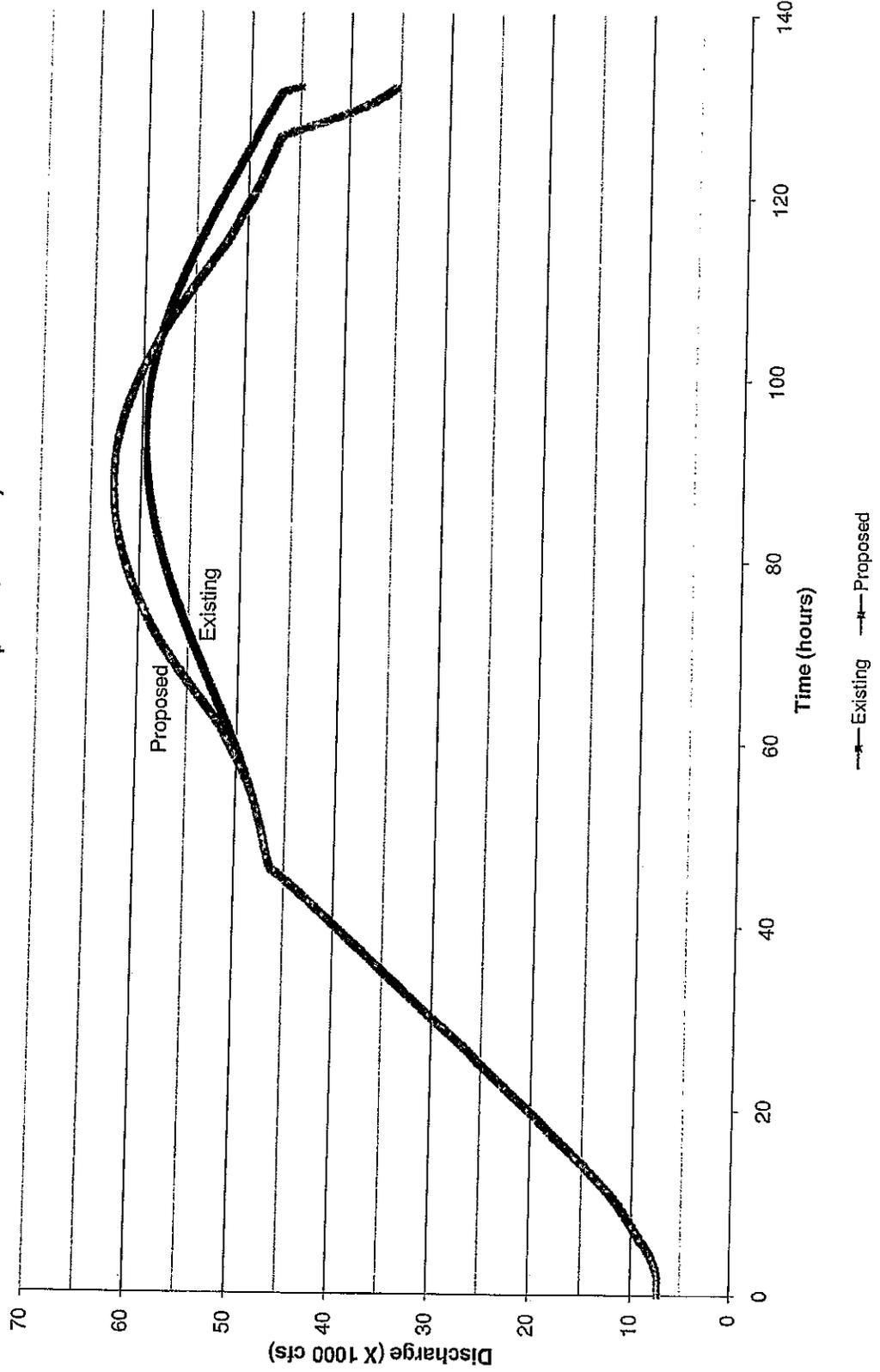
Water Surface Elevation vs. Time @ Crooked Rd.  
100-Year Flood ( $Q_p = 65,500$  cfs)



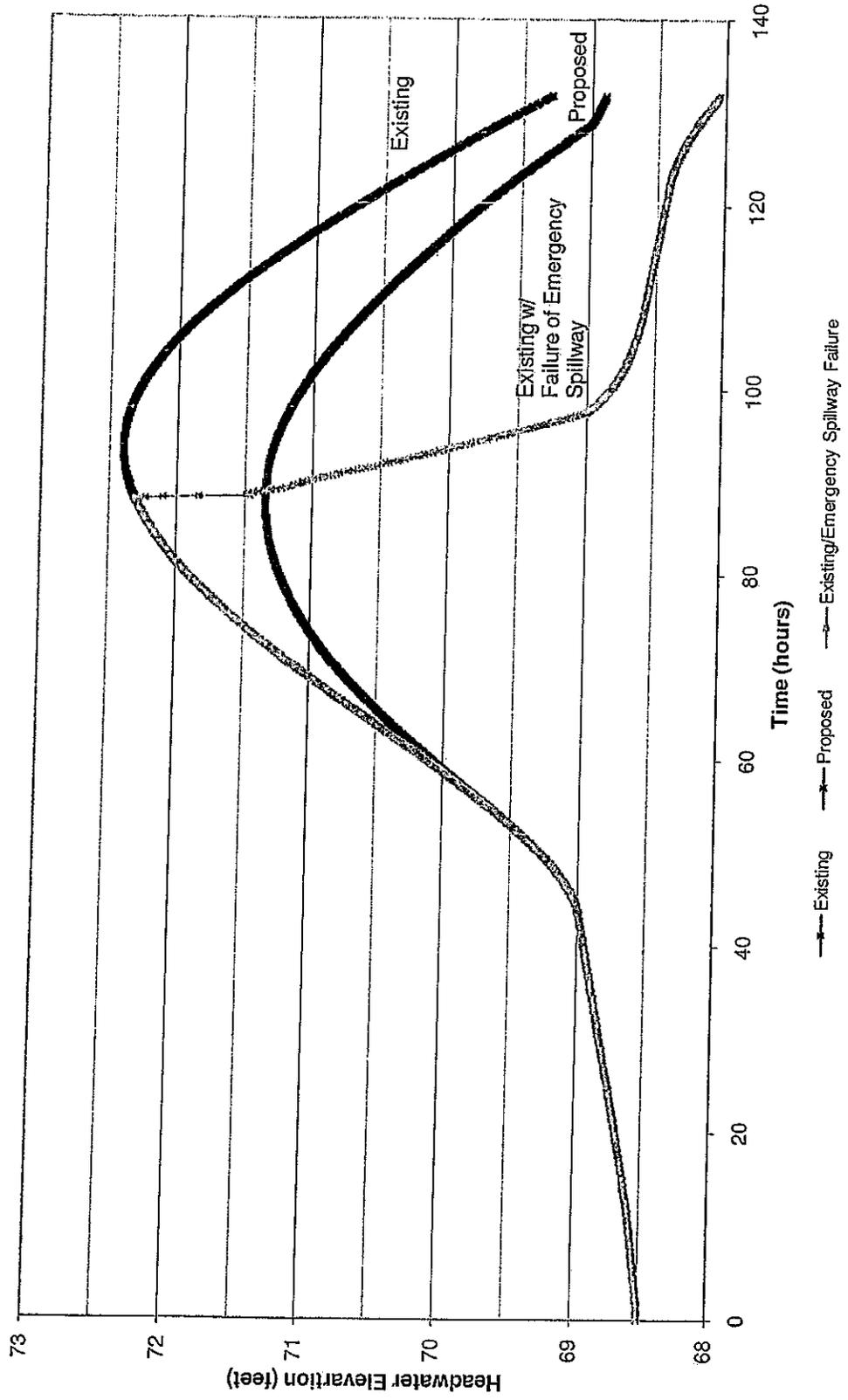
**Tailwater Discharge vs. Time  
100-Year Flood ( $Q_p = 65,500$  cfs)**



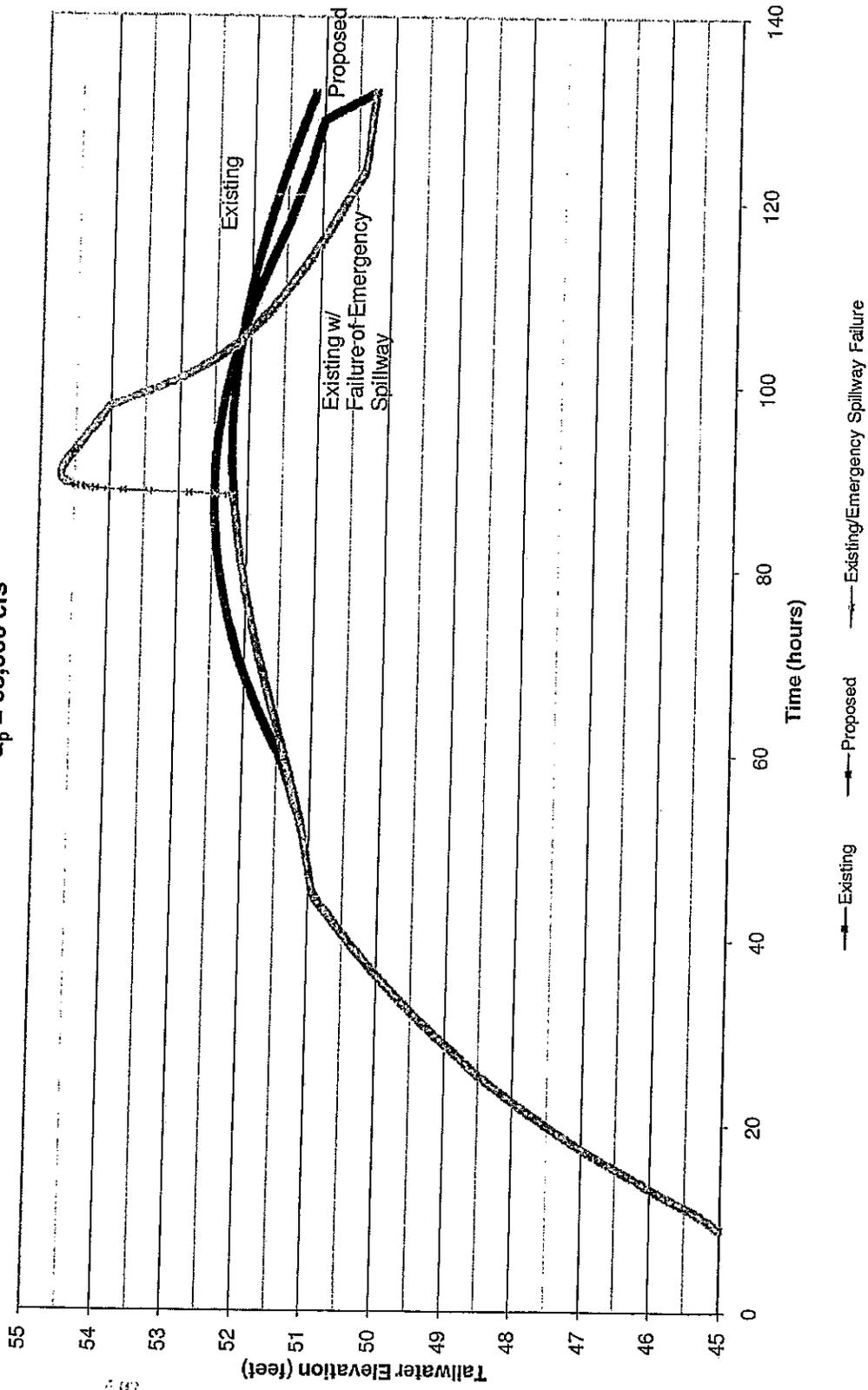
**Discharge vs. Time @ Crooked Rd.  
100-Year Flood ( $Q_p = 65,500$  cfs)**



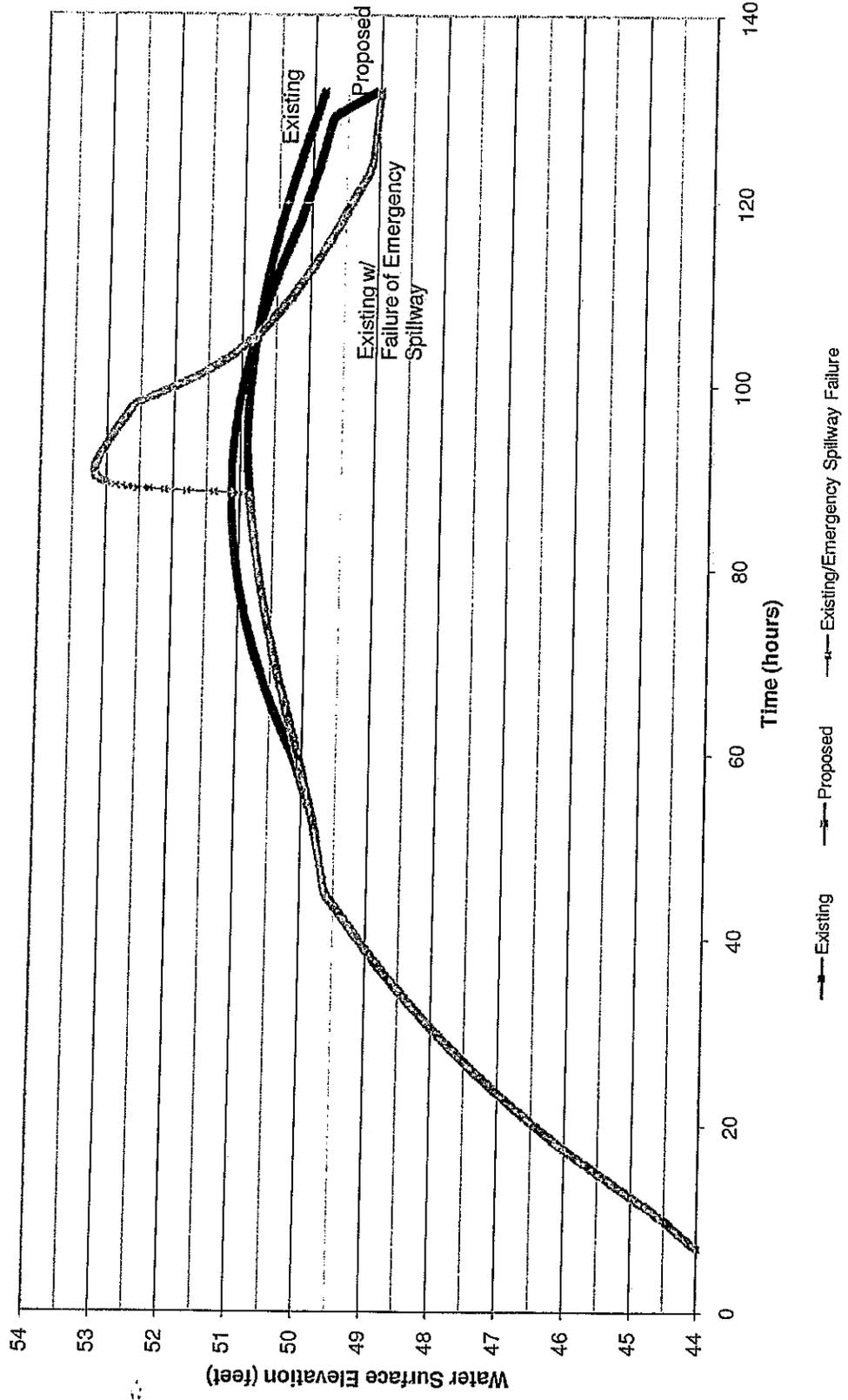
Headwater Elevation vs. Time  
 $Q_p = 68,000$  cfs



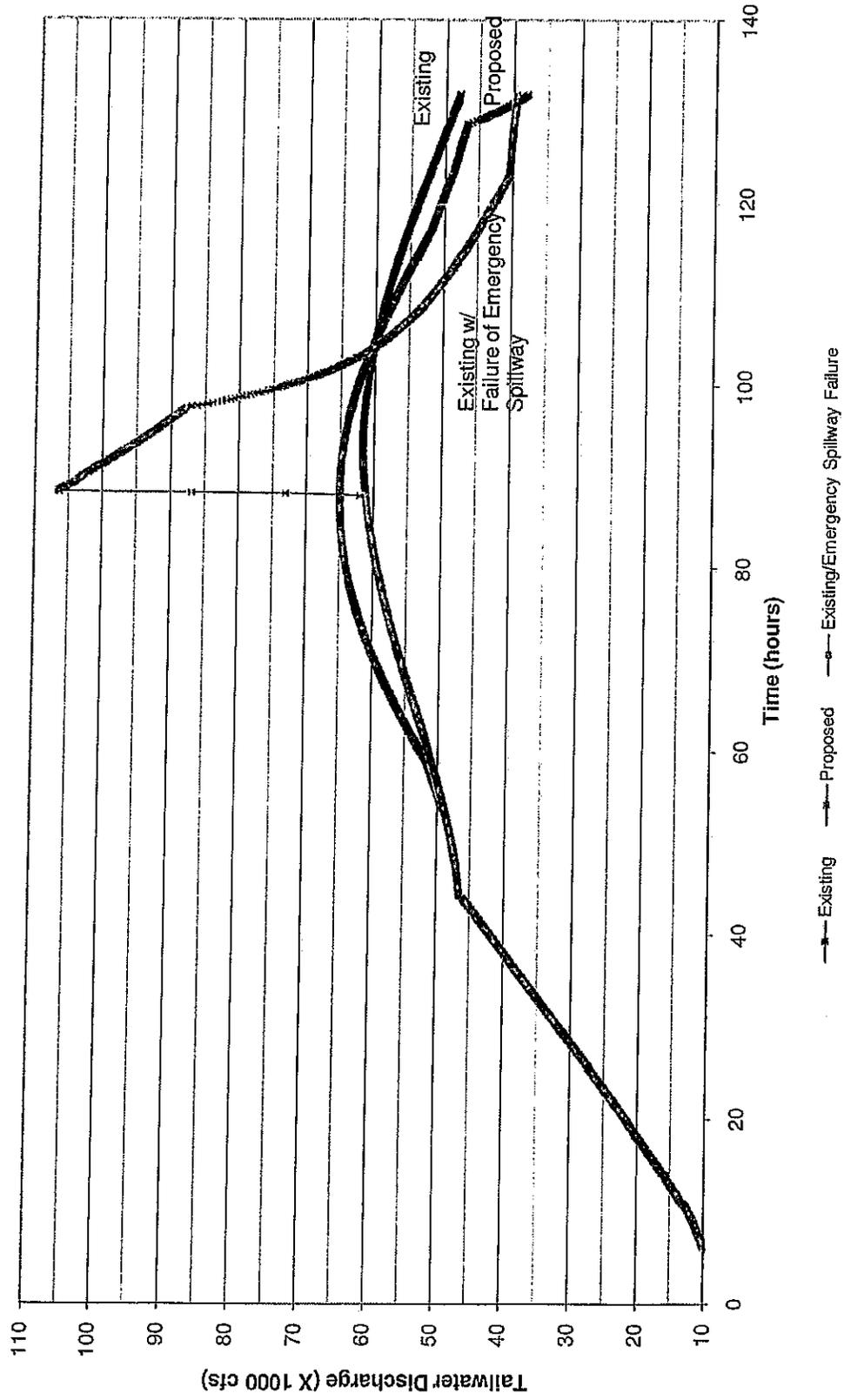
Tailwater Elevation vs. Time  
 $Q_p = 68,000$  cfs



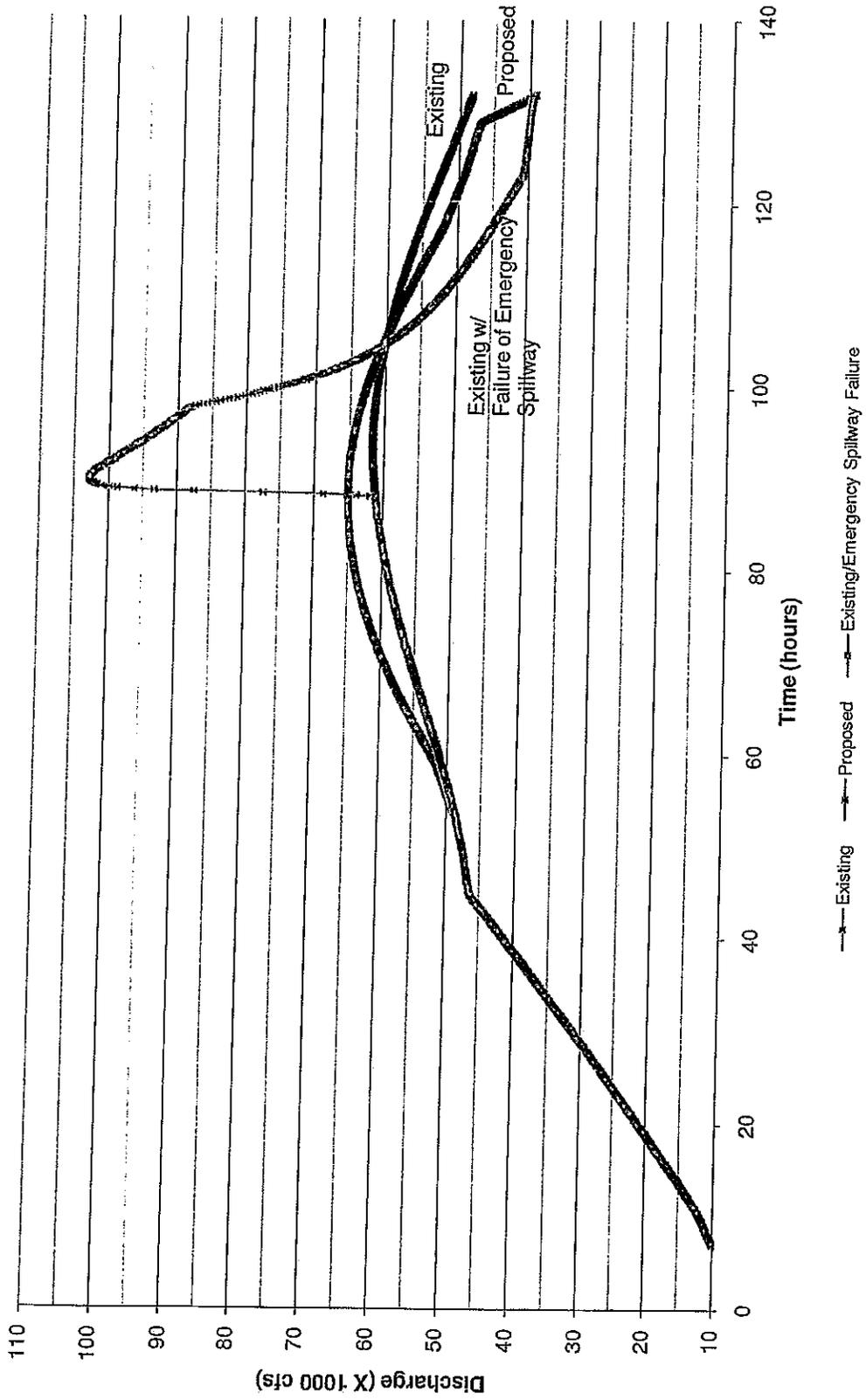
**Water Surface Elevation vs. Time @ Crooked Rd.**  
 **$Q_p = 68,000$  cfs**



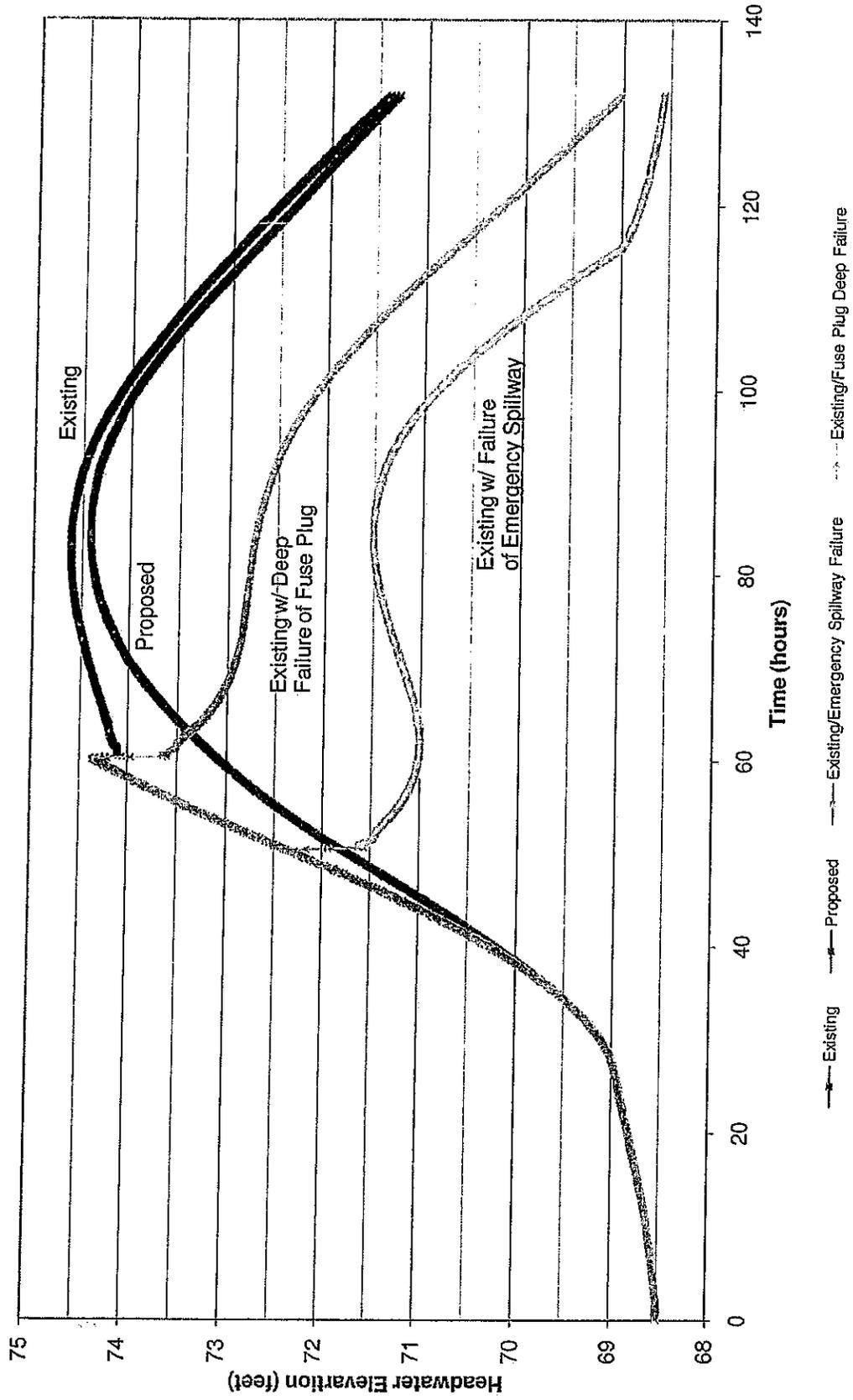
Tailwater Discharge vs. Time  
 $Q_p = 68,000$  cfs



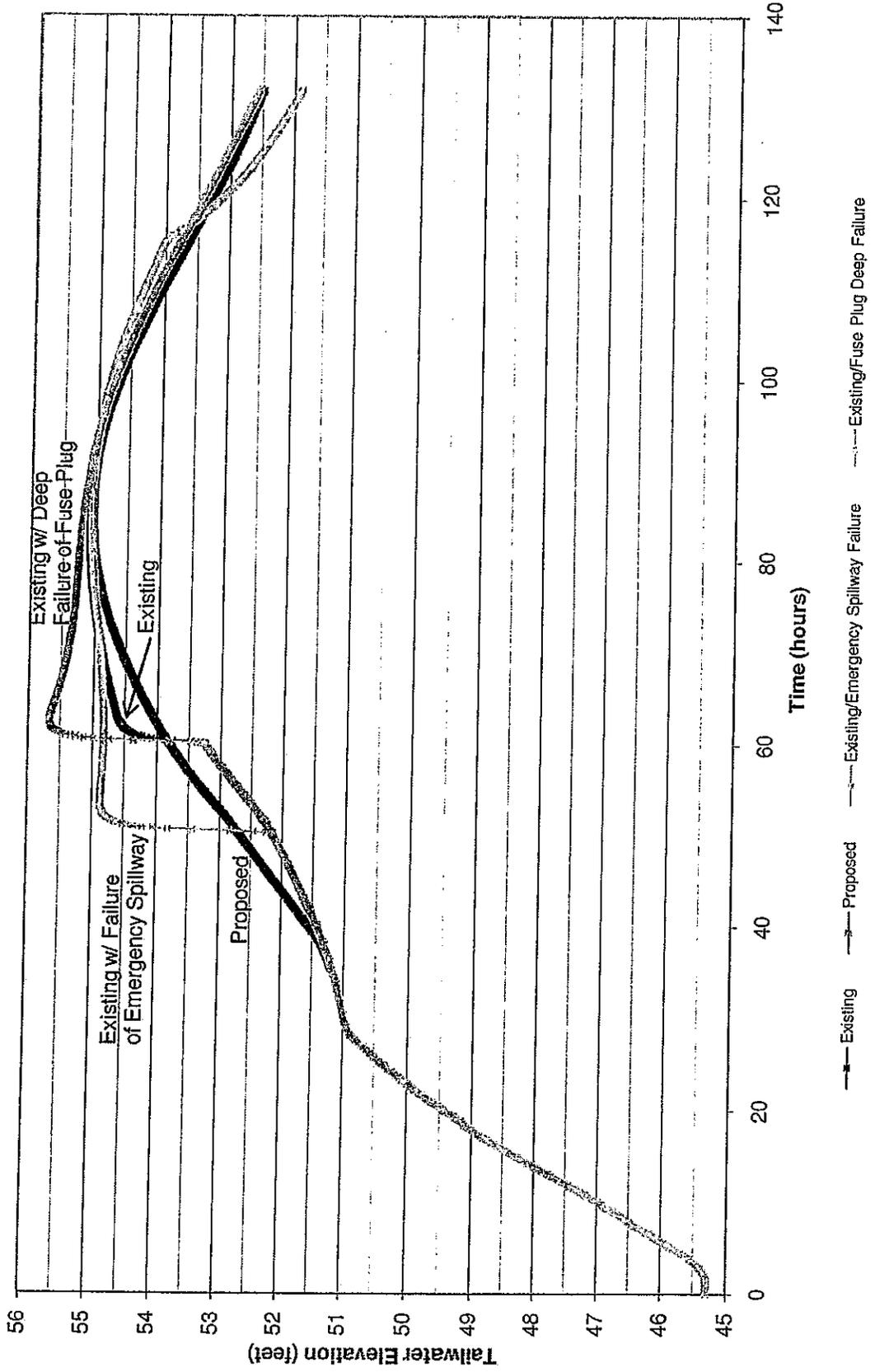
**Discharge vs. Time @ Crooked Rd.**  
 $Q_p = 68,000$  cfs



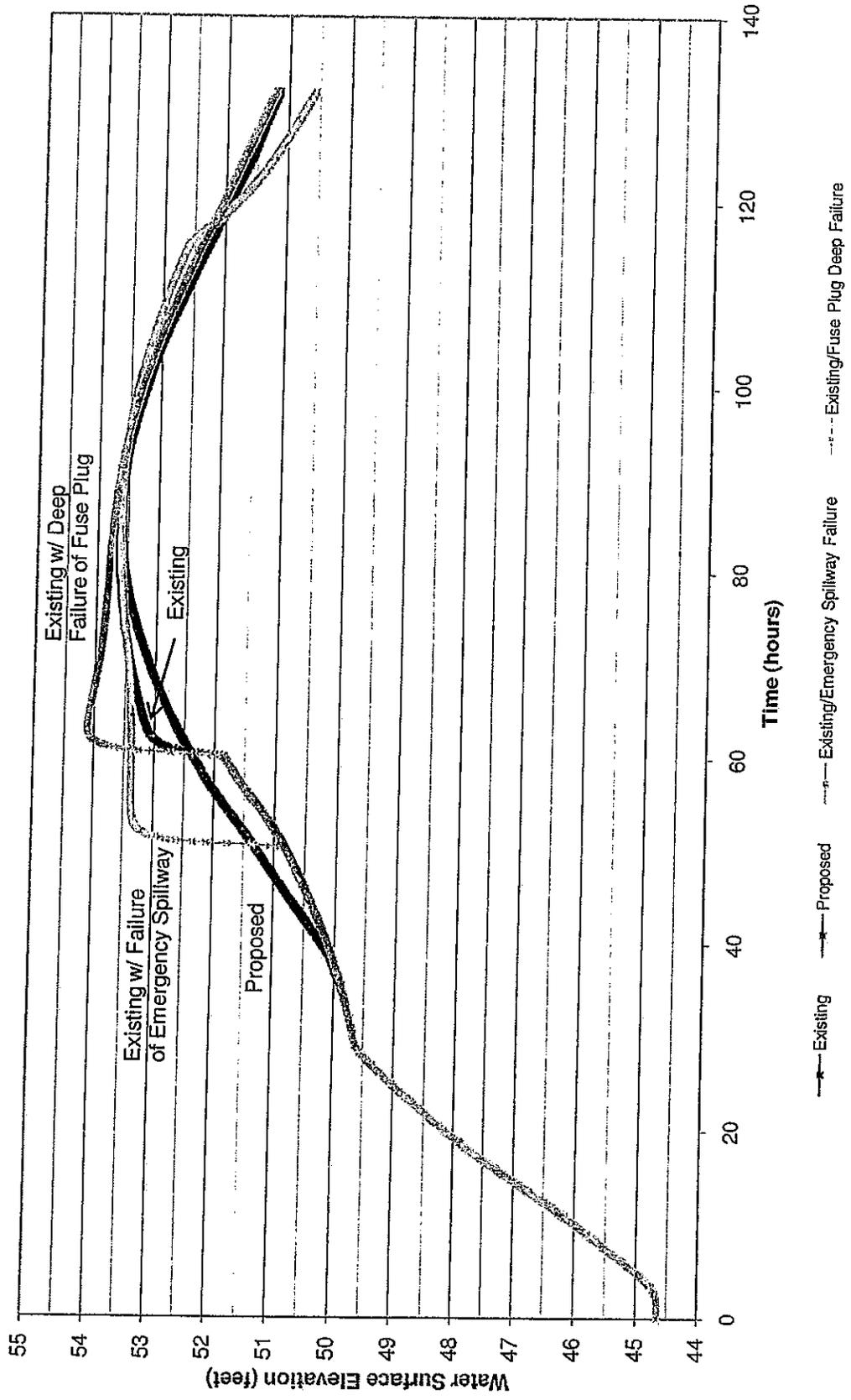
**Headwater Elevation vs. Time  
 500-Year Flood ( $Q_p = 109,000$  cfs)**



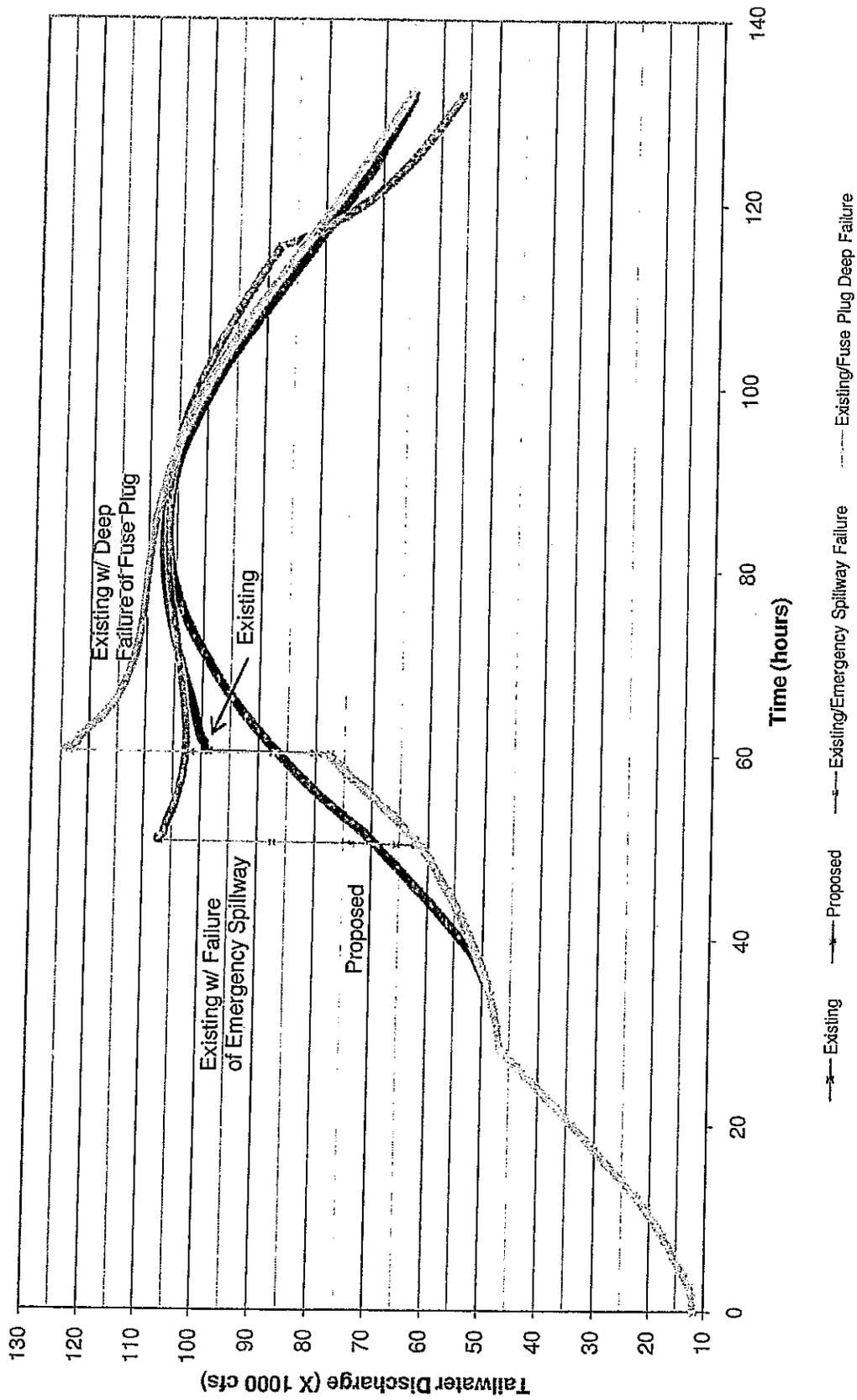
**Tailwater Elevation vs. Time  
 500-Year Flood ( $Q_p = 109,000$  cfs)**



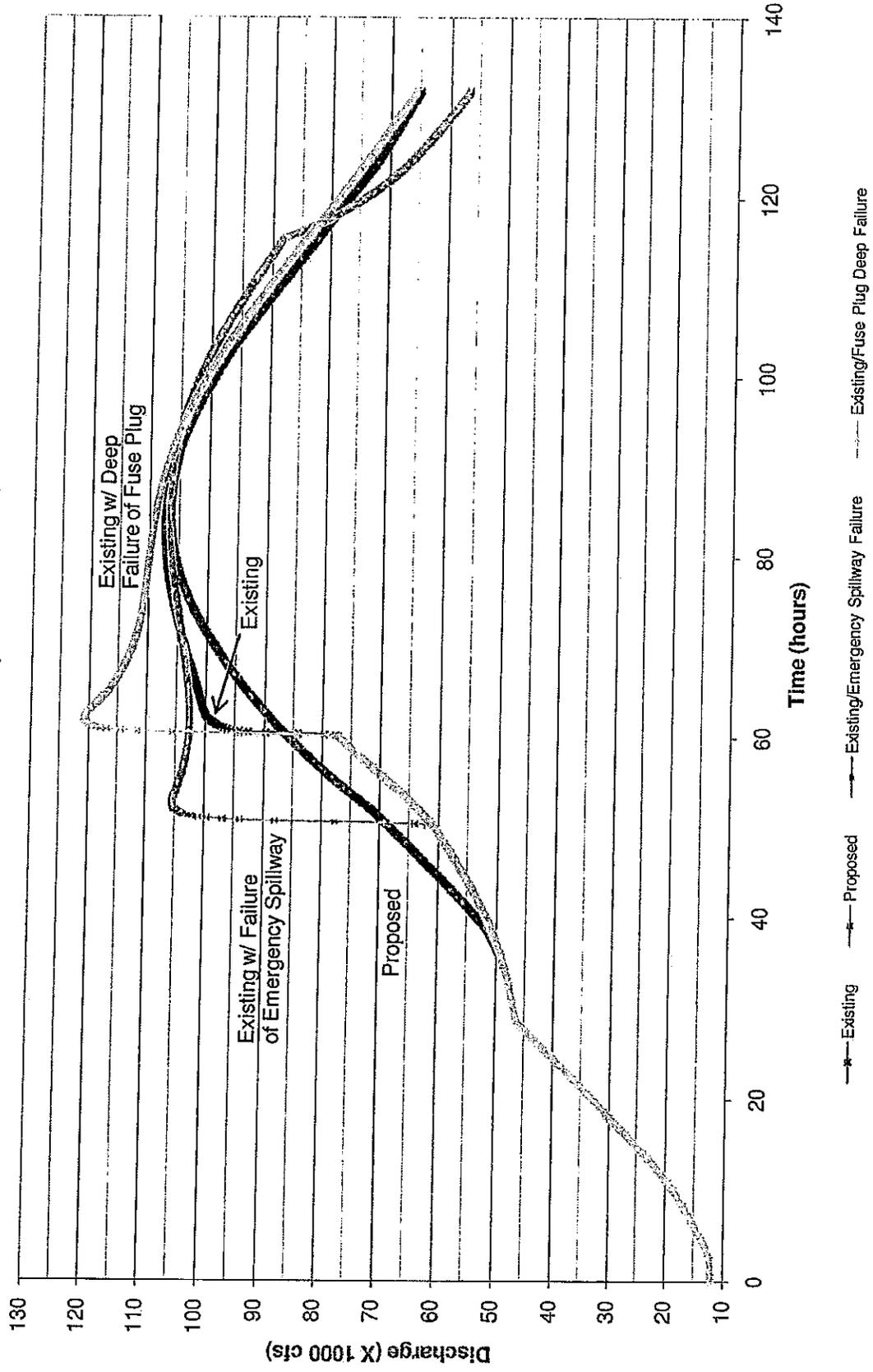
**Water Surface Elevation vs. Time @ Crooked Rd.  
 500-Year Flood ( $Q_p = 109,000$  cfs)**



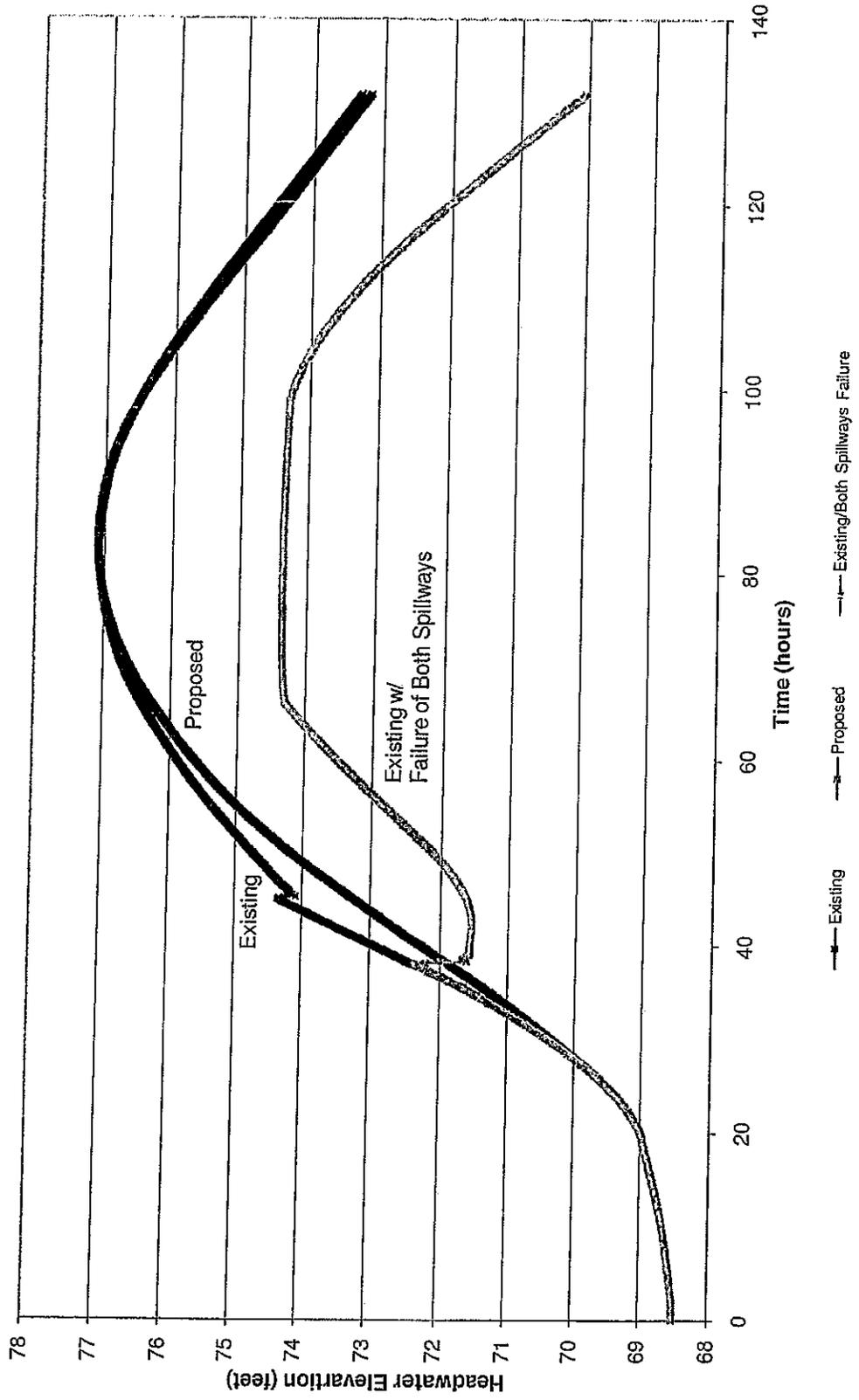
**Tailwater Discharge vs. Time  
 500-Year Flood ( $Q_p = 109,000$  cfs)**



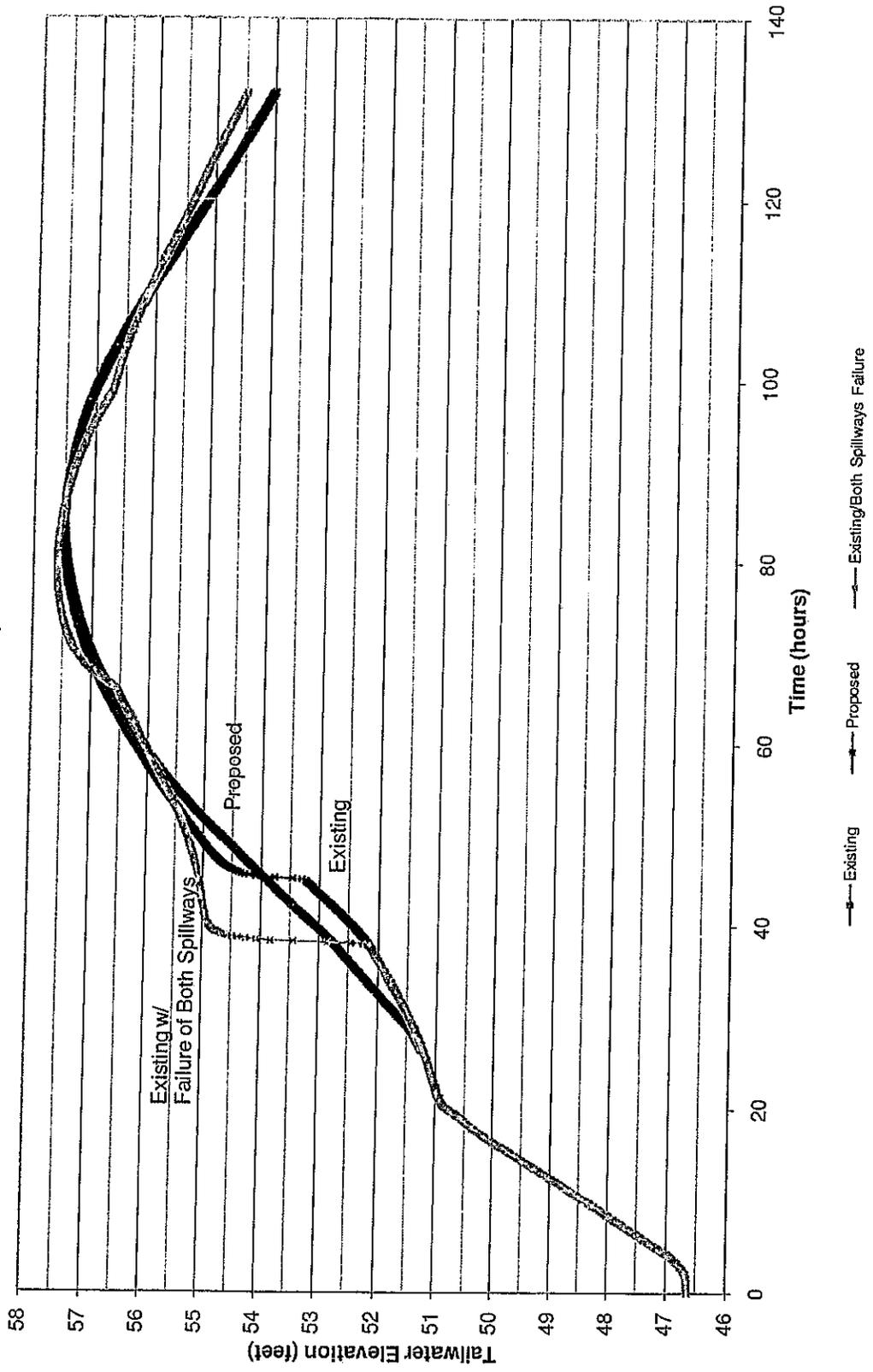
**Discharge vs. Time @ Crooked Rd.  
 500-Year Flood ( $Q_p = 109,000$  cfs)**



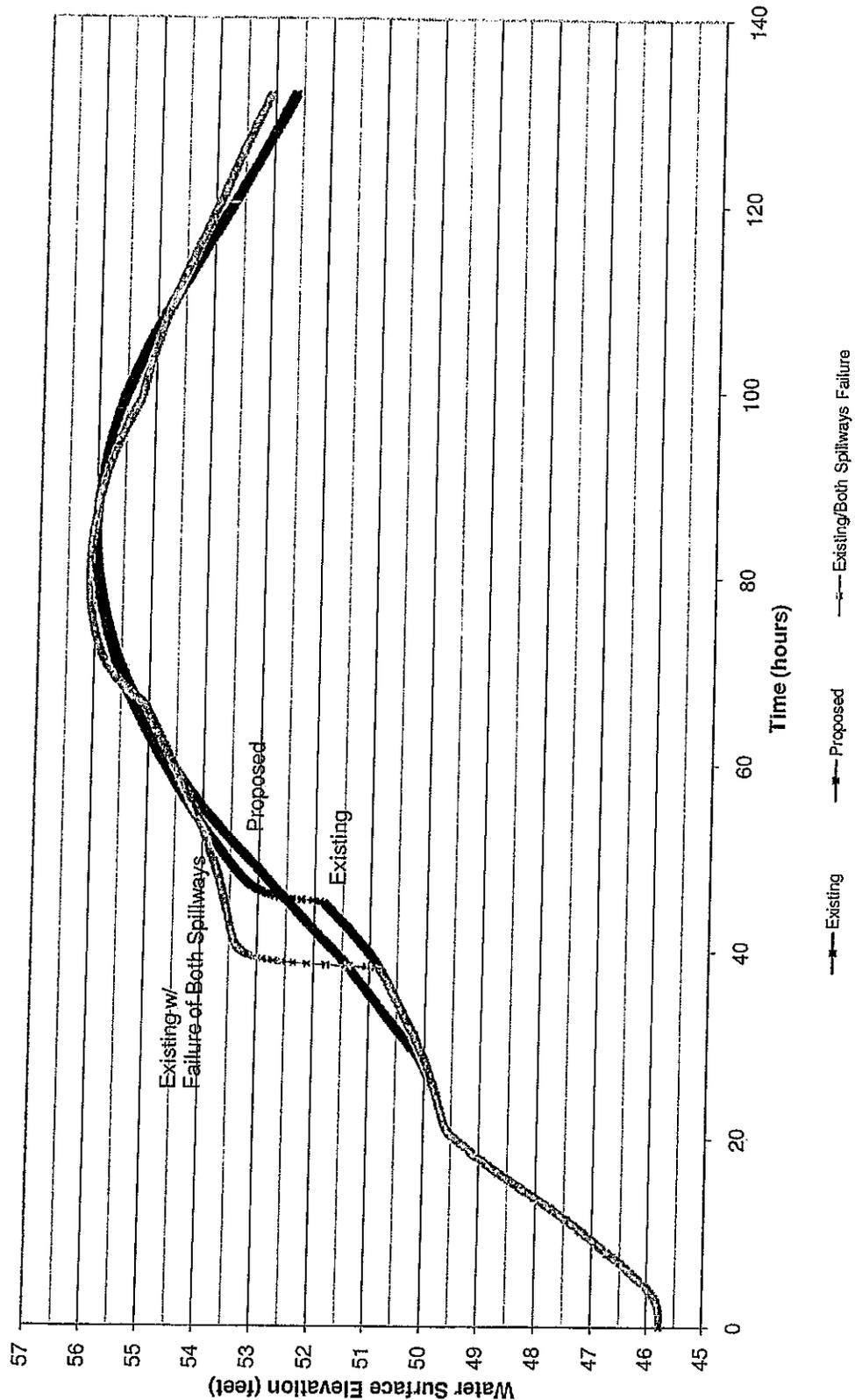
### Headwater Elevation vs. Time Inflow Design Flood ( $Q_p = 154,500$ cfs)



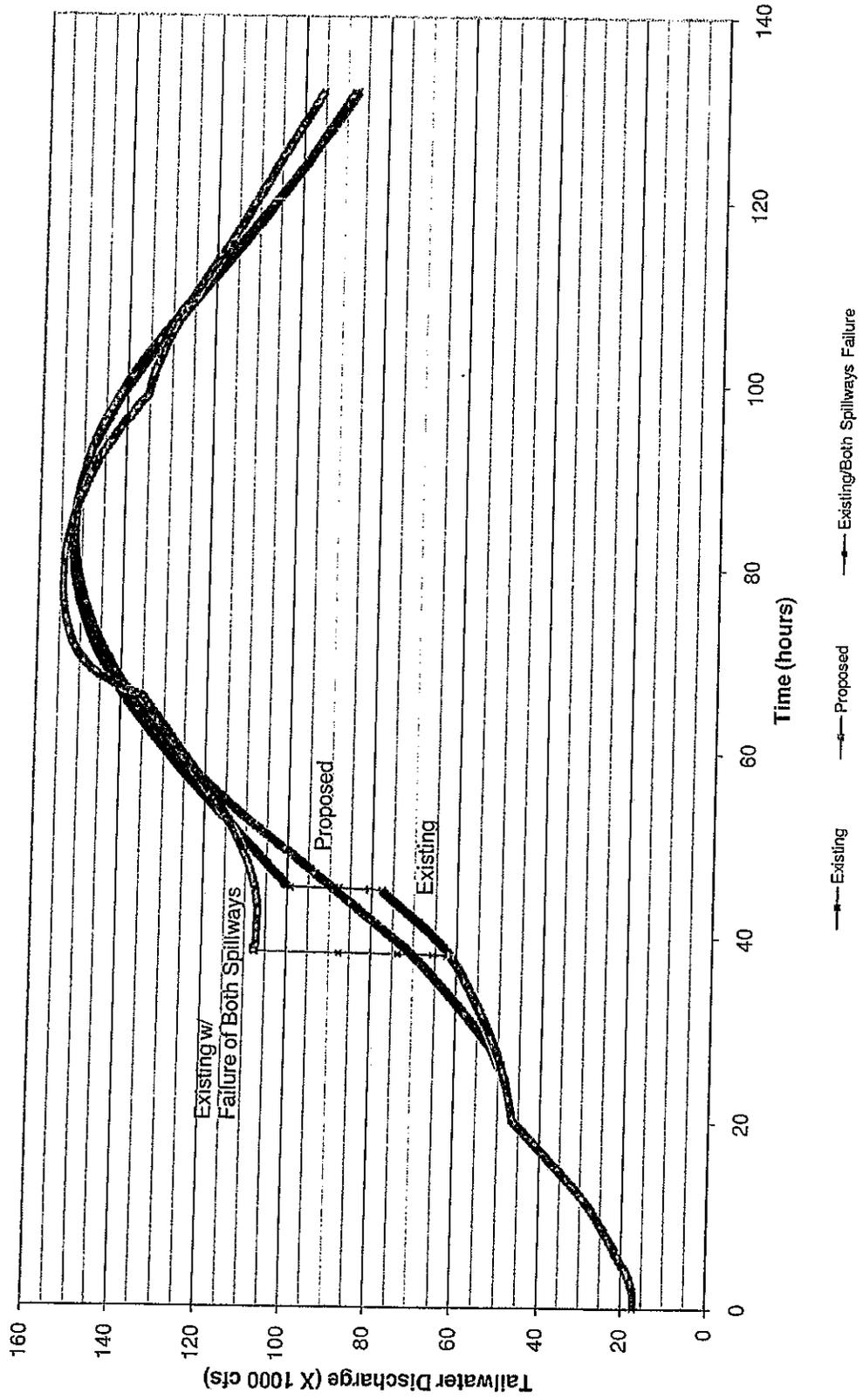
### Tailwater Elevation vs. Time Inflow Design Flood ( $Q_p = 154,500$ cfs)



**Water Surface Elevation vs. Time @ Crooked Rd.  
 Inflow Design Flood ( $Q_p = 154,500$  cfs)**



Tailwater Discharge vs. Time  
 Inflow Design Flood ( $Q_p = 154,500$  cfs)



**Discharge vs. Time @ Crooked Rd.  
Inflow Design Flood ( $Q_p = 154,500$  cfs)**

